



Geographic Information System

Vector Data – Part II Lab Practice - 2

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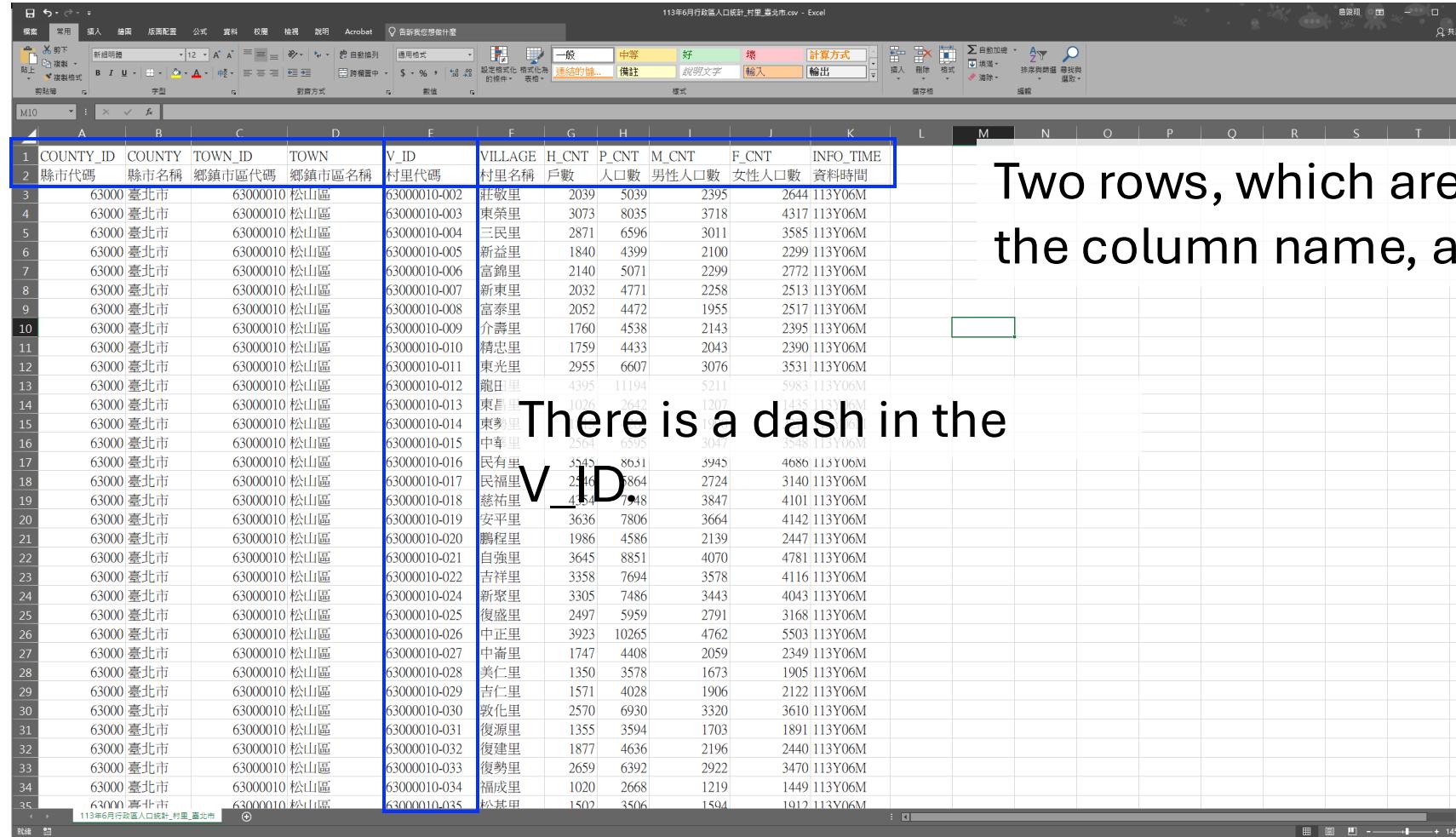
Symbology :: Polygon

Excel/ Join Features/ Single Symbol/ Unique Values/ Graduated Colors/
Bivariate Colors/ Unclassed Colors/ Proportional Symbols/ Graduated
Symbols/ Dot Density/ Bar Chart/ Pie Chart/ Stacked Chart

Procedure for Symbology

- 1) **Excel :: Data Preprocessing for Population Data**
- 2) **GeoAnalytics Desktop Tools/Join Features from POP data to Taipei Village Layer**
- 3) **Symbology :: Single Symbol**
- 4) **Symbology :: Unique Values with District**
- 5) **Symbology :: Graduated Colors with P_CNT**
- 6) **Symbology :: Bivariate Colors with P_CNT**
- 7) **Symbology :: Unclassed Colors with P_CNT**
- 8) **Symbology :: Proportional Symbols for Polygon with P_CNT**
- 9) **Symbology :: Dot Density for Polygon (M/F)**
- 10) **Symbology :: Bar Chart for Polygon (M/F)**
- 11) **Symbology :: Pie Chart for Polygon (M/F)**
- 12) **Symbology :: Stacked Chart for Polygon (M/F)**

Excel :: Data Preprocessing for Population Data



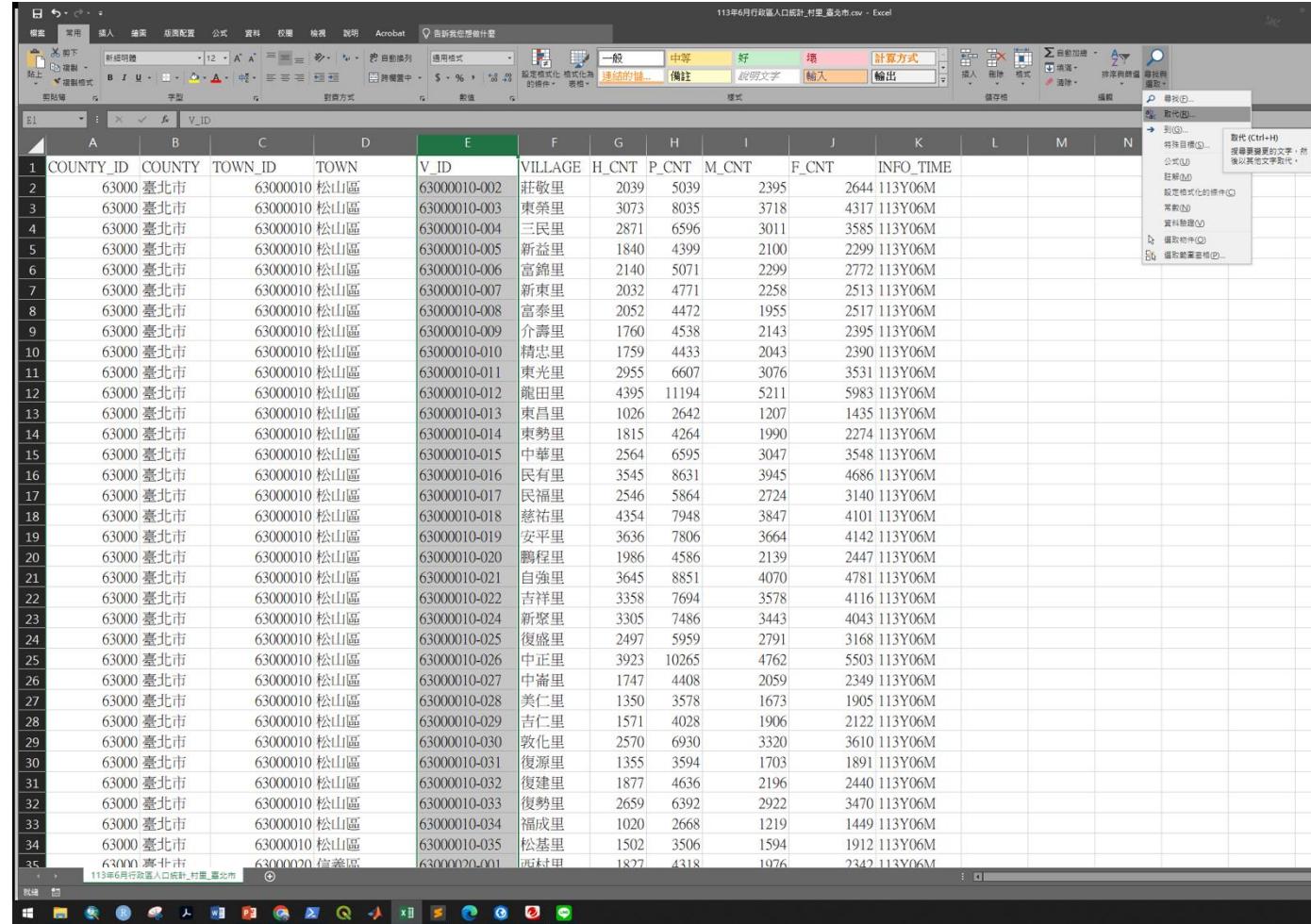
The screenshot shows an Excel spreadsheet titled "113年6月行政區人口統計_村里_臺北市.csv - Excel". The data is organized into several columns representing geographical and demographic information. The first two rows serve as headers, while the subsequent rows contain data for individual villages. A red box highlights the first two rows, and a green box highlights the first row.

COUNTY_ID	COUNTY	TOWN_ID	TOWN	V_ID	VILLAGE	H_CNT	P_CNT	M_CNT	F_CNT	INFO_TIME
縣市代碼	縣市名稱	鄉鎮市區代碼	鄉鎮市區名稱	村里代碼	村里名稱	戶數	人口數	男性人口數	女性人口數	資料時間
63000	臺北市	63000010	松山區	63000010-002	莊敬里	2039	5039	2395	2644	113Y06M
63000	臺北市	63000010	松山區	63000010-003	東榮里	3073	8035	3718	4317	113Y06M
63000	臺北市	63000010	松山區	63000010-004	三民里	2871	6596	3011	3585	113Y06M
63000	臺北市	63000010	松山區	63000010-005	新益里	1840	4399	2100	2299	113Y06M
63000	臺北市	63000010	松山區	63000010-006	富錦里	2140	5071	2299	2772	113Y06M
63000	臺北市	63000010	松山區	63000010-007	新東里	2032	4771	2258	2513	113Y06M
63000	臺北市	63000010	松山區	63000010-008	富泰里	2052	4472	1955	2517	113Y06M
63000	臺北市	63000010	松山區	63000010-009	介壽里	1760	4538	2143	2395	113Y06M
63000	臺北市	63000010	松山區	63000010-010	精忠里	1759	4433	2043	2390	113Y06M
63000	臺北市	63000010	松山區	63000010-011	東光里	2955	6607	3076	3531	113Y06M
63000	臺北市	63000010	松山區	63000010-012	龍田里	4395	11194	5211	5983	113Y06M
63000	臺北市	63000010	松山區	63000010-013	東昌里	1026	2642	1207	1435	113Y06M
63000	臺北市	63000010	松山區	63000010-014	東勢里	1900	4935	2274	2661	113Y06M
63000	臺北市	63000010	松山區	63000010-015	中華里	2561	6535	3041	3545	113Y06M
63000	臺北市	63000010	松山區	63000010-016	民有里	3545	8631	3945	4686	113Y06M
63000	臺北市	63000010	松山區	63000010-017	民福里	2546	5864	2724	3140	113Y06M
63000	臺北市	63000010	松山區	63000010-018	慈祐里	4354	7948	3847	4101	113Y06M
63000	臺北市	63000010	松山區	63000010-019	安平里	3636	7806	3664	4142	113Y06M
63000	臺北市	63000010	松山區	63000010-020	鵬程里	1986	4586	2139	2447	113Y06M
63000	臺北市	63000010	松山區	63000010-021	自強里	3645	8851	4070	4781	113Y06M
63000	臺北市	63000010	松山區	63000010-022	吉祥里	3358	7694	3578	4116	113Y06M
63000	臺北市	63000010	松山區	63000010-024	新寮里	3305	7486	3443	4043	113Y06M
63000	臺北市	63000010	松山區	63000010-025	復盛里	2497	5959	2791	3168	113Y06M
63000	臺北市	63000010	松山區	63000010-026	中正里	3923	10265	4762	5503	113Y06M
63000	臺北市	63000010	松山區	63000010-027	中崙里	1747	4408	2059	2349	113Y06M
63000	臺北市	63000010	松山區	63000010-028	美仁里	1350	3578	1673	1905	113Y06M
63000	臺北市	63000010	松山區	63000010-029	吉仁里	1571	4028	1906	2122	113Y06M
63000	臺北市	63000010	松山區	63000010-030	敦化里	2570	6930	3320	3610	113Y06M
63000	臺北市	63000010	松山區	63000010-031	復源里	1355	3594	1703	1891	113Y06M
63000	臺北市	63000010	松山區	63000010-032	復建里	1877	4636	2196	2440	113Y06M
63000	臺北市	63000010	松山區	63000010-033	復勢里	2659	6392	2922	3470	113Y06M
63000	臺北市	63000010	松山區	63000010-034	福成里	1020	2668	1219	1449	113Y06M
63000	臺北市	63000010	松山區	63000010-035	松其里	1502	3506	1594	1912	113Y06M

Two rows, which are used to show the column name, are redundant.

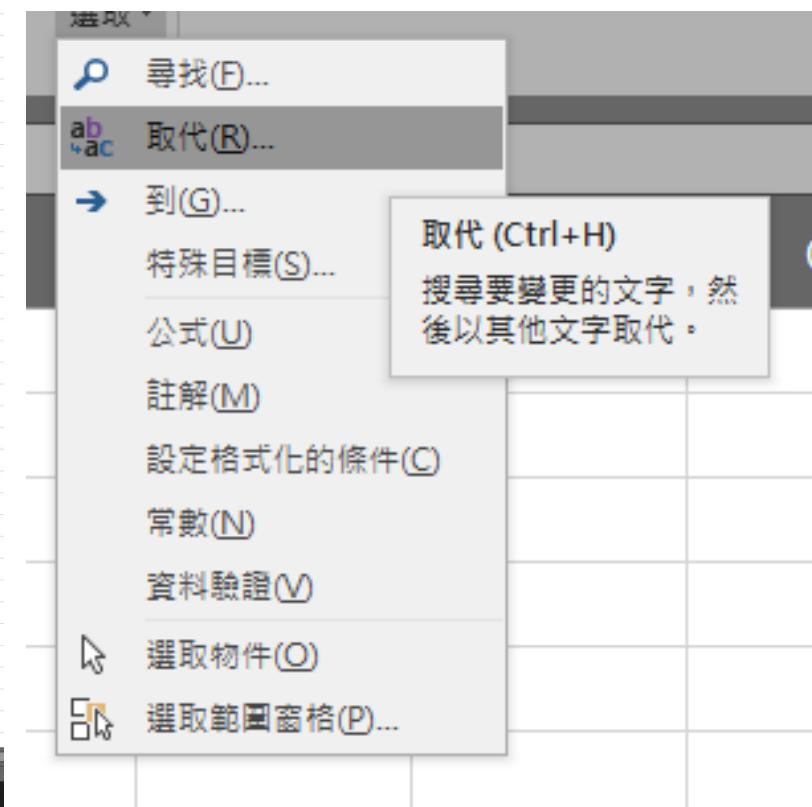
There is a dash in the V_ID.

Excel :: Data Preprocessing for Population Data



	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	COUNTY_ID	COUNTY	TOWN_ID	TOWN	V_ID	VILLAGE	H_CNT	P_CNT	M_CNT	F_CNT	INFO_TIME			
2	63000	臺北市	63000010	松山區	63000010-002	莊敬里	2039	5039	2395	2644	113Y06M			
3	63000	臺北市	63000010	松山區	63000010-003	東榮里	3073	8035	3718	4317	113Y06M			
4	63000	臺北市	63000010	松山區	63000010-004	三民里	2871	6596	3011	3585	113Y06M			
5	63000	臺北市	63000010	松山區	63000010-005	新益里	1840	4399	2100	2299	113Y06M			
6	63000	臺北市	63000010	松山區	63000010-006	富錦里	2140	5071	2299	2772	113Y06M			
7	63000	臺北市	63000010	松山區	63000010-007	新東里	2032	4771	2258	2513	113Y06M			
8	63000	臺北市	63000010	松山區	63000010-008	富泰里	2052	4472	1955	2517	113Y06M			
9	63000	臺北市	63000010	松山區	63000010-009	介壽里	1760	4538	2143	2395	113Y06M			
10	63000	臺北市	63000010	松山區	63000010-010	精忠里	1759	4433	2043	2390	113Y06M			
11	63000	臺北市	63000010	松山區	63000010-011	東光里	2955	6607	3076	3531	113Y06M			
12	63000	臺北市	63000010	松山區	63000010-012	龍田里	4395	11194	5211	5983	113Y06M			
13	63000	臺北市	63000010	松山區	63000010-013	東昌里	1026	2642	1207	1435	113Y06M			
14	63000	臺北市	63000010	松山區	63000010-014	東勢里	1815	4264	1990	2274	113Y06M			
15	63000	臺北市	63000010	松山區	63000010-015	中華里	2564	6595	3047	3548	113Y06M			
16	63000	臺北市	63000010	松山區	63000010-016	民有里	3545	8631	3945	4686	113Y06M			
17	63000	臺北市	63000010	松山區	63000010-017	民福里	2546	5864	2724	3140	113Y06M			
18	63000	臺北市	63000010	松山區	63000010-018	慈祐里	4354	7948	3847	4101	113Y06M			
19	63000	臺北市	63000010	松山區	63000010-019	安平里	3636	7806	3664	4142	113Y06M			
20	63000	臺北市	63000010	松山區	63000010-020	鵬程里	1986	4586	2139	2447	113Y06M			
21	63000	臺北市	63000010	松山區	63000010-021	自強里	3645	8851	4070	4781	113Y06M			
22	63000	臺北市	63000010	松山區	63000010-022	吉祥里	3358	7694	3578	4116	113Y06M			
23	63000	臺北市	63000010	松山區	63000010-024	新聚里	3305	7486	3443	4043	113Y06M			
24	63000	臺北市	63000010	松山區	63000010-025	復盛里	2497	5959	2791	3168	113Y06M			
25	63000	臺北市	63000010	松山區	63000010-026	中正里	3923	10265	4762	5503	113Y06M			
26	63000	臺北市	63000010	松山區	63000010-027	中崙里	1747	4408	2059	2349	113Y06M			
27	63000	臺北市	63000010	松山區	63000010-028	美仁里	1350	3578	1673	1905	113Y06M			
28	63000	臺北市	63000010	松山區	63000010-029	吉仁里	1571	4028	1906	2122	113Y06M			
29	63000	臺北市	63000010	松山區	63000010-030	敦化里	2570	6930	3320	3610	113Y06M			
30	63000	臺北市	63000010	松山區	63000010-031	復源里	1355	3594	1703	1891	113Y06M			
31	63000	臺北市	63000010	松山區	63000010-032	復建里	1877	4636	2196	2440	113Y06M			
32	63000	臺北市	63000010	松山區	63000010-033	復勢里	2659	6392	2922	3470	113Y06M			
33	63000	臺北市	63000010	松山區	63000010-034	福成里	1020	2668	1219	1449	113Y06M			
34	63000	臺北市	63000010	松山區	63000010-035	松基里	1502	3506	1594	1912	113Y06M			
35	63000	臺北市	63000020	信義區	63000020-001	西村甲	1827	4318	1976	2342	113Y06M			

Find all “dash” and replace by blank “”.

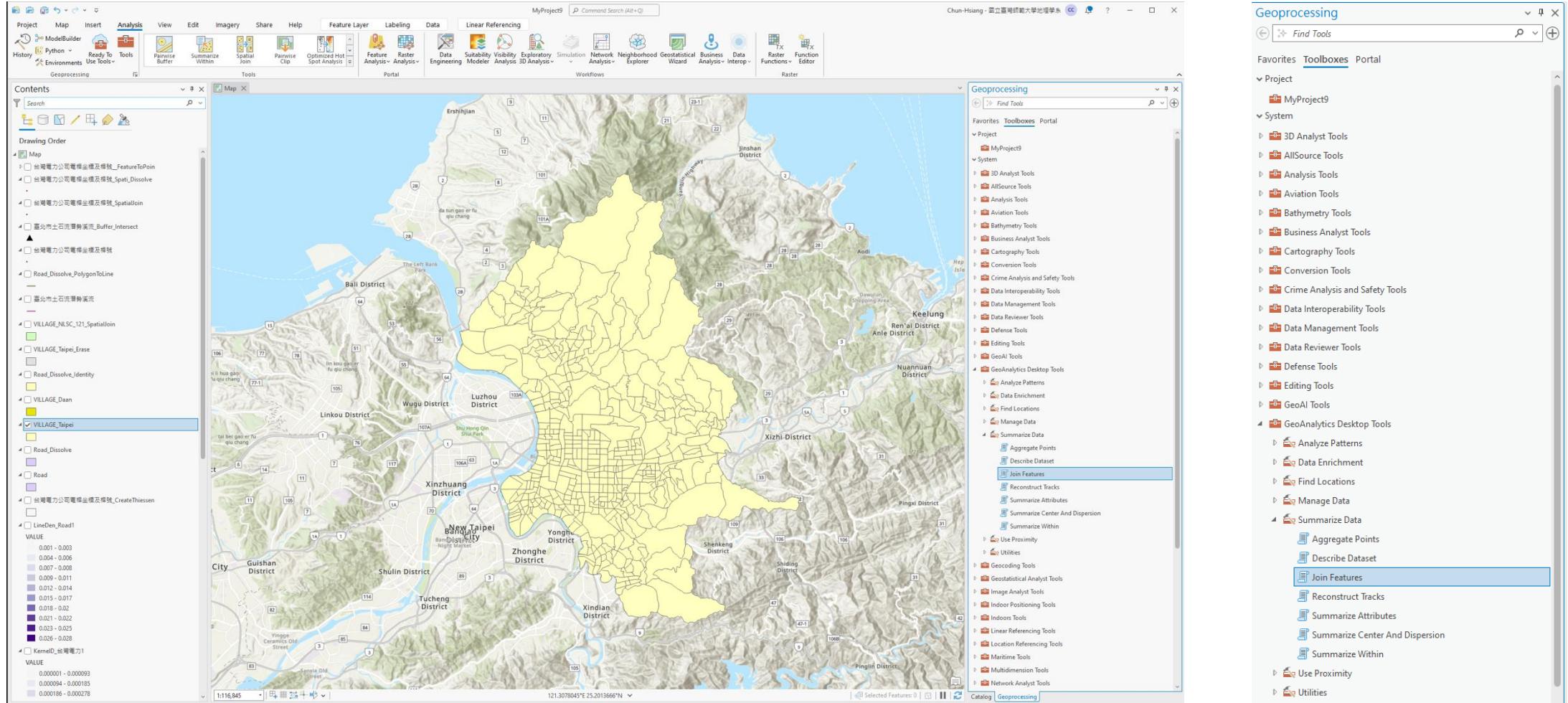


Excel :: Data Preprocessing for Population Data

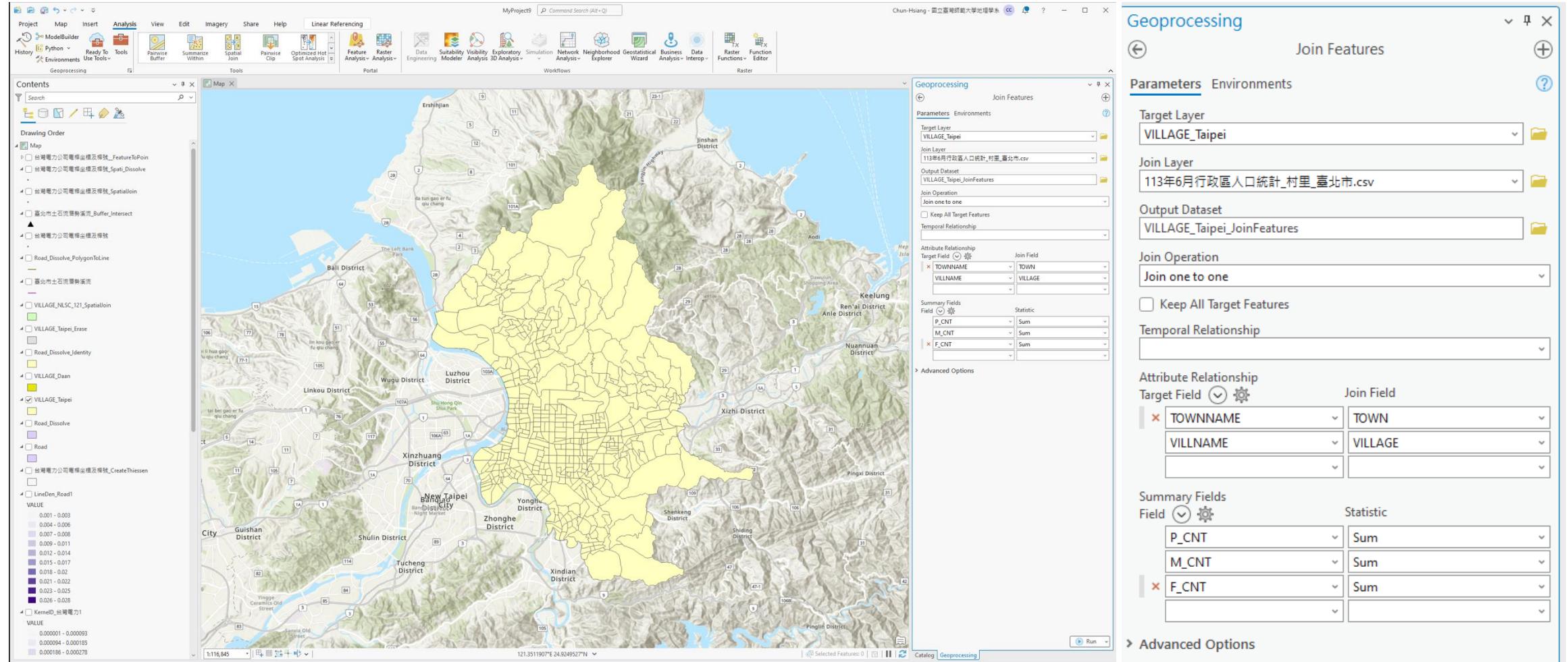
The image displays two side-by-side Excel spreadsheets, both titled "113年6月行政區人口統計_村里_臺北市.csv - Excel". The left spreadsheet shows the original data with columns: A (row index), B (COUNTY_ID), C (COUNTY), D (TOWN_ID), E (V_ID), F (VILLAGE), G (H_CNT), H (P_CNT), I (M_CNT), J (F_CNT), K (INFO_TIME). The right spreadsheet shows the preprocessed data with columns: A (row index), B (COUNTY_ID), C (COUNTY), D (TOWN_ID), E (V_ID), F (VILLAGE), G (H_CNT), H (P_CNT), I (M_CNT), J (F_CNT), K (INFO_TIME). Both spreadsheets contain 35 rows of data, representing villages in Taipei City.

	B	C	D	E	F	G	H	I	J	K	
1	COUNTY_ID	COUNTY	TOWN_ID	TOWN	V_ID	VILLAGE	H_CNT	P_CNT	M_CNT	F_CNT	INFO_TIME
2	63000	臺北市	63000010	松山區	63000010-002	莊敬里	2039	5039	2395	2644	113Y06M
3	63000	臺北市	63000010	松山區	63000010-003	東榮里	3073	8035	3718	4317	113Y06M
4	63000	臺北市	63000010	松山區	63000010-004	三民里	2871	6596	3011	3585	113Y06M
5	63000	臺北市	63000010	松山區	63000010-005	新益里	1840	4399	2100	2299	113Y06M
6	63000	臺北市	63000010	松山區	63000010-006	富錦里	2140	5071	2299	2772	113Y06M
7	63000	臺北市	63000010	松山區	63000010-007	臺北里	158	2513	113Y06M		
8	63000	臺北市	63000010	松山區	63000010-008	昌泰里	55	2517	113Y06M		
9	63000	臺北市	63000010	松山區	63000010-009	自強里	43	2395	113Y06M		
10	63000	臺北市	63000010	松山區	63000010-010	忠信里	43	2390	113Y06M		
11	63000	臺北市	63000010	松山區	63000010-011	精忠里	76	3531	113Y06M		
12	63000	臺北市	63000010	松山區	63000010-012	仁愛里	11	5983	113Y06M		
13	63000	臺北市	63000010	松山區	63000010-013	崇善里	207	1435	113Y06M		
14	63000	臺北市	63000010	松山區	63000010-014	東勢里	1815	4264	1990	2274	113Y06M
15	63000	臺北市	63000010	松山區	63000010-015	中華里	2564	6595	3047	3548	113Y06M
16	63000	臺北市	63000010	松山區	63000010-016	民有里	3545	8631	3945	4686	113Y06M
17	63000	臺北市	63000010	松山區	63000010-017	民福里	2546	5864	2724	3140	113Y06M
18	63000	臺北市	63000010	松山區	63000010-018	慈祐里	4354	7948	3847	4101	113Y06M
19	63000	臺北市	63000010	松山區	63000010-019	安平里	3636	7806	3664	4142	113Y06M
20	63000	臺北市	63000010	松山區	63000010-020	鵬程里	1986	4586	2139	2447	113Y06M
21	63000	臺北市	63000010	松山區	63000010-021	自強里	3645	8851	4070	4781	113Y06M
22	63000	臺北市	63000010	松山區	63000010-022	吉祥里	3358	7694	3578	4116	113Y06M
23	63000	臺北市	63000010	松山區	63000010-024	新聚里	3305	7486	3443	4043	113Y06M
24	63000	臺北市	63000010	松山區	63000010-025	復盛里	2497	5959	2791	3168	113Y06M
25	63000	臺北市	63000010	松山區	63000010-026	中正里	3923	10265	4762	5503	113Y06M
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27	63000	臺北市	63000010	松山區	63000010-028	美仁里	1350	3578	1673	1905	113Y06M
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29	63000	臺北市	63000010	松山區	63000010-030	敦化里	2570	6930	3320	3610	113Y06M
30	63000	臺北市	63000010	松山區	63000010-031	復源里	1355	3594	1703	1891	113Y06M
31	63000	臺北市	63000010	松山區	63000010-032	復建里	1877	4636	2196	2440	113Y06M
32	63000	臺北市	63000010	松山區	63000010-033	復勢里	2659	6392	2922	3470	113Y06M
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34	63000	臺北市	63000010	松山區	63000010-035	松基里	1502	3506	1594	1912	113Y06M
35	63000	臺北市	63000020	信義區	63000020-001	西村里	1827	4318	1976	2342	113Y06M

GeoAnalytics Desktop Tools/Join Features from POP Data to Taipei Village Layer



GeoAnalytics Desktop Tools/Join Features from POP Data to Taipei Village Layer



GeoAnalytics Desktop Tools/Join Features from POP Data to Taipei Village Layer

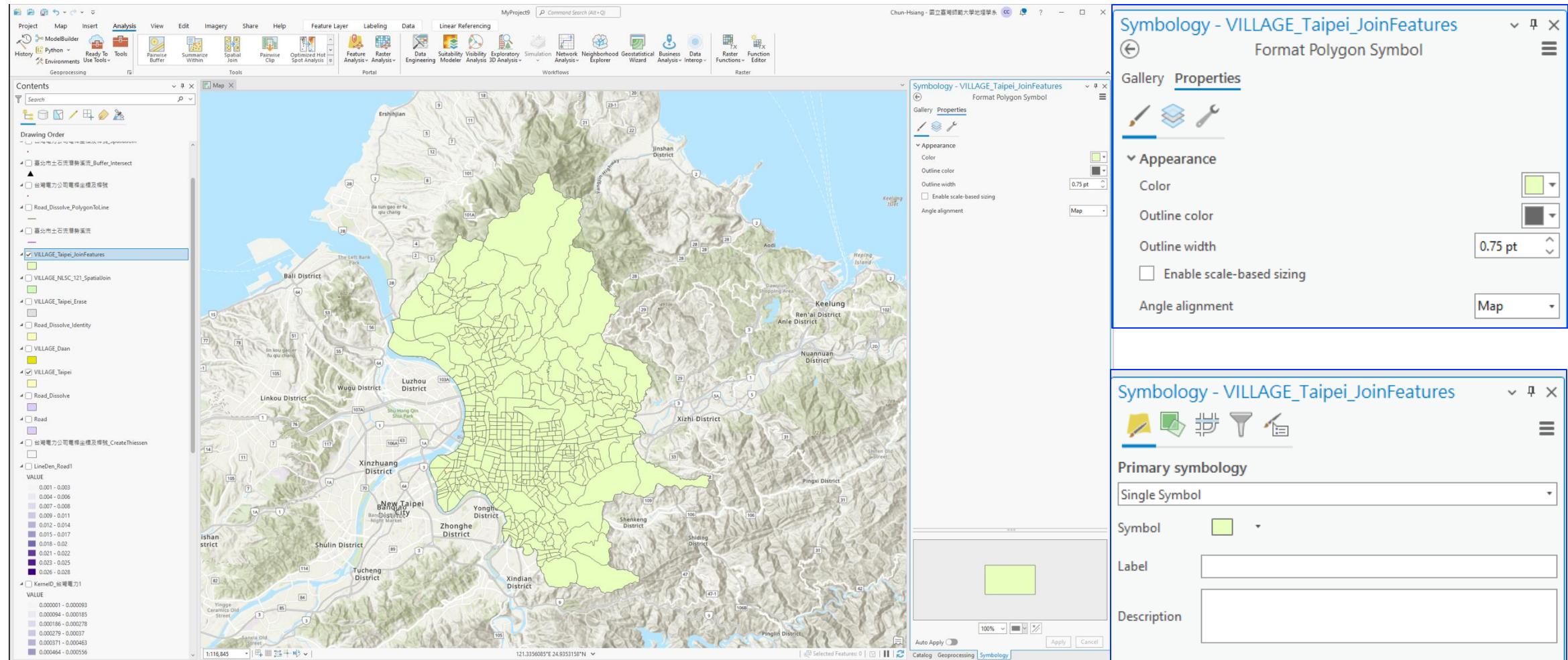
The screenshot shows the GeoAnalytics Desktop interface. The main window displays a map of Taipei, Taiwan, with various districts and village boundaries. A legend on the left shows different colors representing population density ranges. Below the map is a table titled "VILLAGE_Taipei_JoinFeatures" with 20 rows of data. To the right of the map is a "Geoprocessing" panel with a "Join Features" sub-panel. The "Target Layer" is set to "VILLAGE_Taipei". The "Join Layer" is set to "113年6月行政區人口統計_村里_臺北市.csv". The "Output Dataset" is set to "VILLAGE_Taipei_JoinFeatures". The "Join Operation" is set to "Join one to one". The "Attribute Relationship" section maps "TOWNNAME" to "TOWN" and "VILLNAME" to "VILLAGE". The "Summary Fields" section includes fields "P_CNT", "M_CNT", and "F_CNT" with statistics "Sum". The "Geoprocessing" panel also shows a progress bar indicating the task is completed.

YNAME	TOWNNAME	VILLNAME	VILLENG	COUNTYID	COUNTYCODE	TOWNID	TOWNCODE	NOTE	COUNT	SUM_P_CNT	SUM_M_CNT	SUM_F_CNT	SF
1	松山區	東光里	Dongguang Vill.	A	63000	A01	63000010		1	6607	3076	3531	Pc
2	大同區	迪義里	Jiantai Vill.	A	63000	A09	63000060		1	3640	1729	1911	Pc
3	中山區	正芳里	Zhengyi Vill.	A	63000	A10	63000040		1	5152	2198	2954	Pc
4	中山區	正福里	Zhengfu Vill.	A	63000	A10	63000040		1	3695	1603	2092	Pc
5	文山區	崇善里	Jingdong Vill.	A	63000	A11	63000060		1	7237	3344	3893	Pc
6	萬華區	重慶里	Zhongqing Vill.	A	63000	A13	63000090		1	6175	2927	3248	Pc
7	中正區	興亞里	Xingya Vill.	A	63000	A10	63000040		1	5452	2458	2994	Pc
8	內湖區	石湖里	Shihe Vill.	A	63000	A14	63000100		1	4134	1943	2191	Pc
9	內湖區	湖光里	Huayu Vill.	A	63000	A14	63000100		1	6551	3109	3442	Pc
10	松山區	翠芳里	Ciyou Vill.	A	63000	A01	63000010		1	7948	3847	4101	Pc
11	大同區	捷功里	Jiungong Vill.	A	63000	A09	63000060		1	4640	2194	2446	Pc
12	文山區	政大里	Zhengda Vill.	A	63000	A11	63000060		1	7999	3841	4158	Pc
13	內湖區	益州里	Luzhou Vill.	A	63000	A14	63000100		1	1264	667	597	Pc
14	萬華區	吉新里	Xitxin Vill.	A	63000	A13	63000090		1	4487	2167	2320	Pc
15	文山區	崇善里	Jingding Vill.	A	63000	A11	63000060		1	6443	3017	3426	Pc
16	中山區	朱園里	Zhuoyuan Vill.	A	63000	A10	63000040		1	4469	2010	2459	Pc
17	文山區	興華里	Xinghua Vill.	A	63000	A11	63000060		1	7191	3450	3741	Pc
18	大同區	保安里	Bao'an Vill.	A	63000	A09	63000060		1	4336	2051	2285	Pc
19	文山區	崇仁里	Jingren Vill.	A	63000	A11	63000060		1	6049	2813	3236	Pc
20	文山區	木柵里	Muzha Vill.	A	63000	A11	63000060		1	9599	4474	5125	Pc

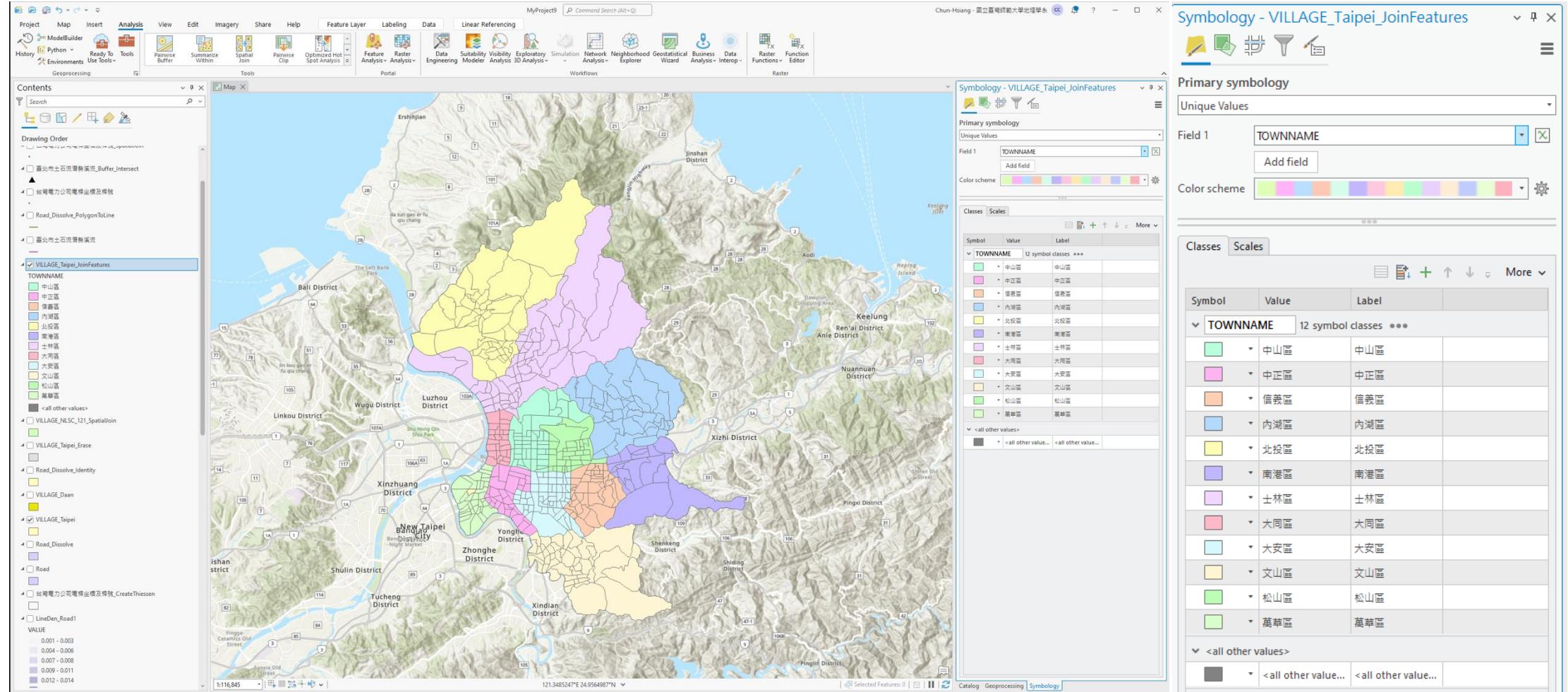
The screenshot shows a table of joined features data. The columns are labeled: COUNT, SUM_P_CNT, SUM_M_CNT, SUM_F_CNT, SF, and PC. The data consists of 20 rows, each corresponding to a village in Taipei. The "PC" column contains a large number of zeros, while other columns show varying values. The last row shows a total sum of 8070 for the first three columns and 4101 for the fourth column.

COUNT	SUM_P_CNT	SUM_M_CNT	SUM_F_CNT	SF	PC
1	6607	3076	3531	Pc	0
1	3640	1729	1911	Pc	0
1	5152	2198	2954	Pc	0
1	3695	1603	2092	Pc	0
1	7237	3344	3893	Pc	0
1	6175	2927	3248	Pc	0
1	5452	2458	2994	Pc	0
1	4134	1943	2191	Pc	0
1	6551	3109	3442	Pc	0
1	7948	3847	4101	Pc	0
1	4640	2194	2446	Pc	0
1	7999	3841	4158	Pc	0
1	1264	667	597	Pc	0
1	4487	2167	2320	Pc	0
1	6443	3017	3426	Pc	0
1	4469	2010	2459	Pc	0
1	7191	3450	3741	Pc	0
1	4336	2051	2285	Pc	0
1	6049	2813	3236	Pc	0
1	9599	4474	5125	Pc	0
1	8070	3928	4101	Pc	0

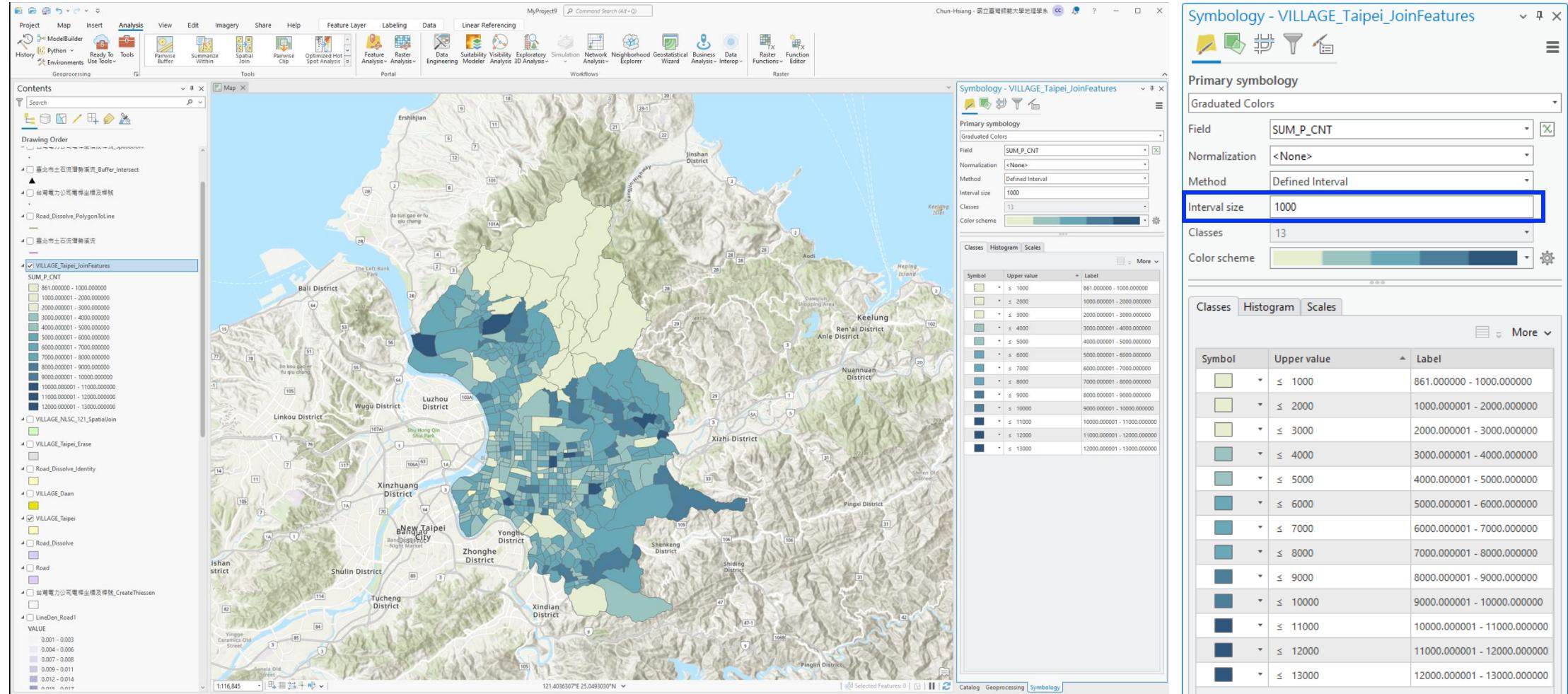
Symbology :: Single Symbol



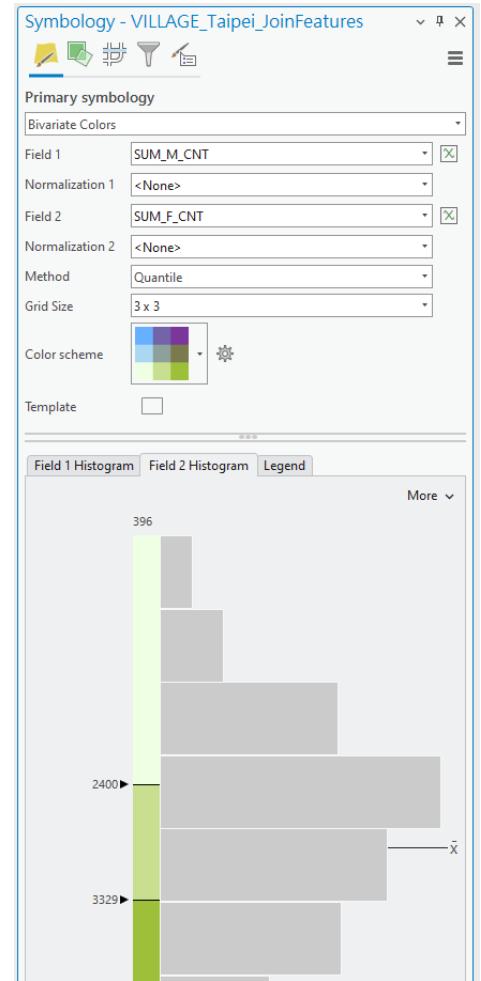
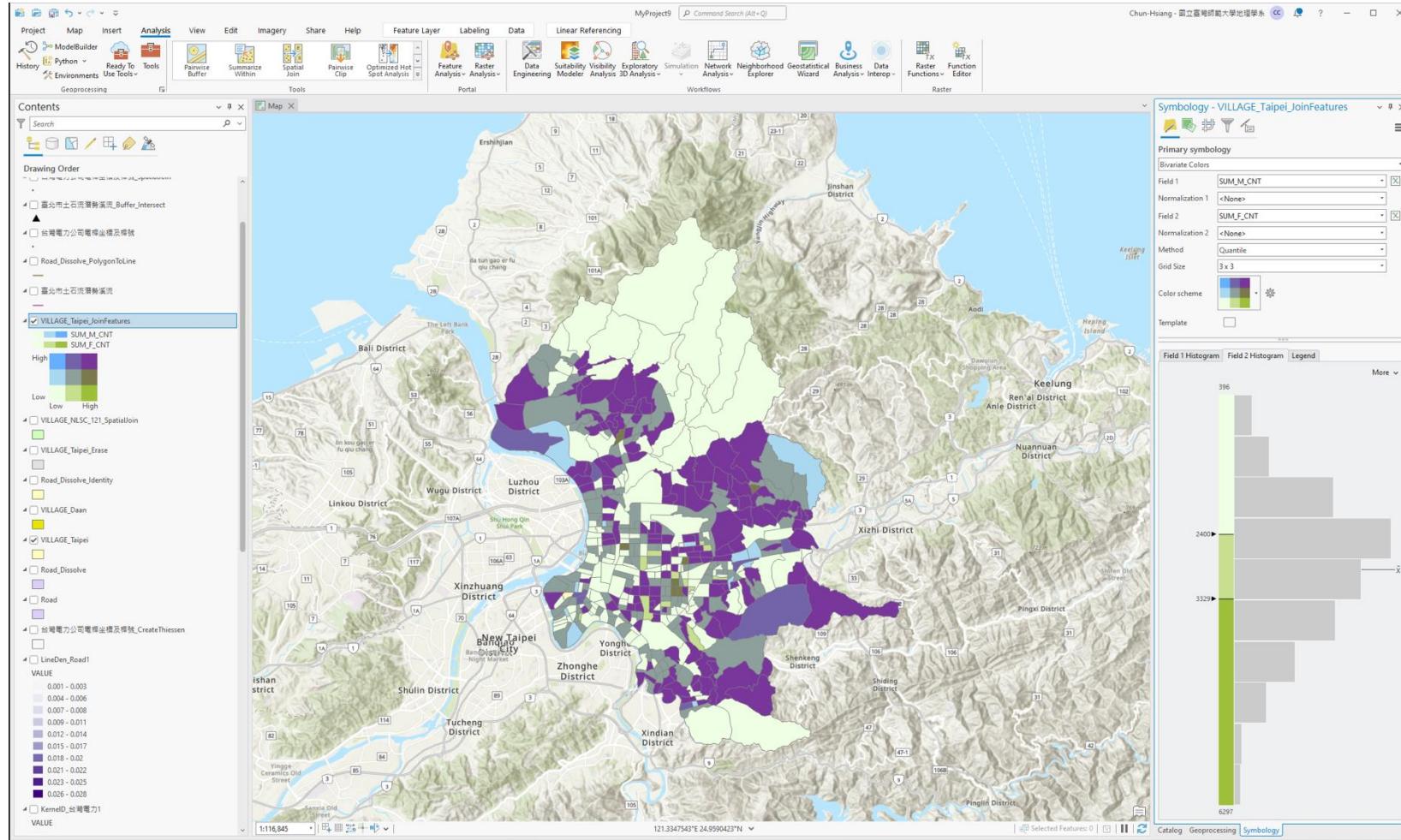
Symbology :: Unique Values with District



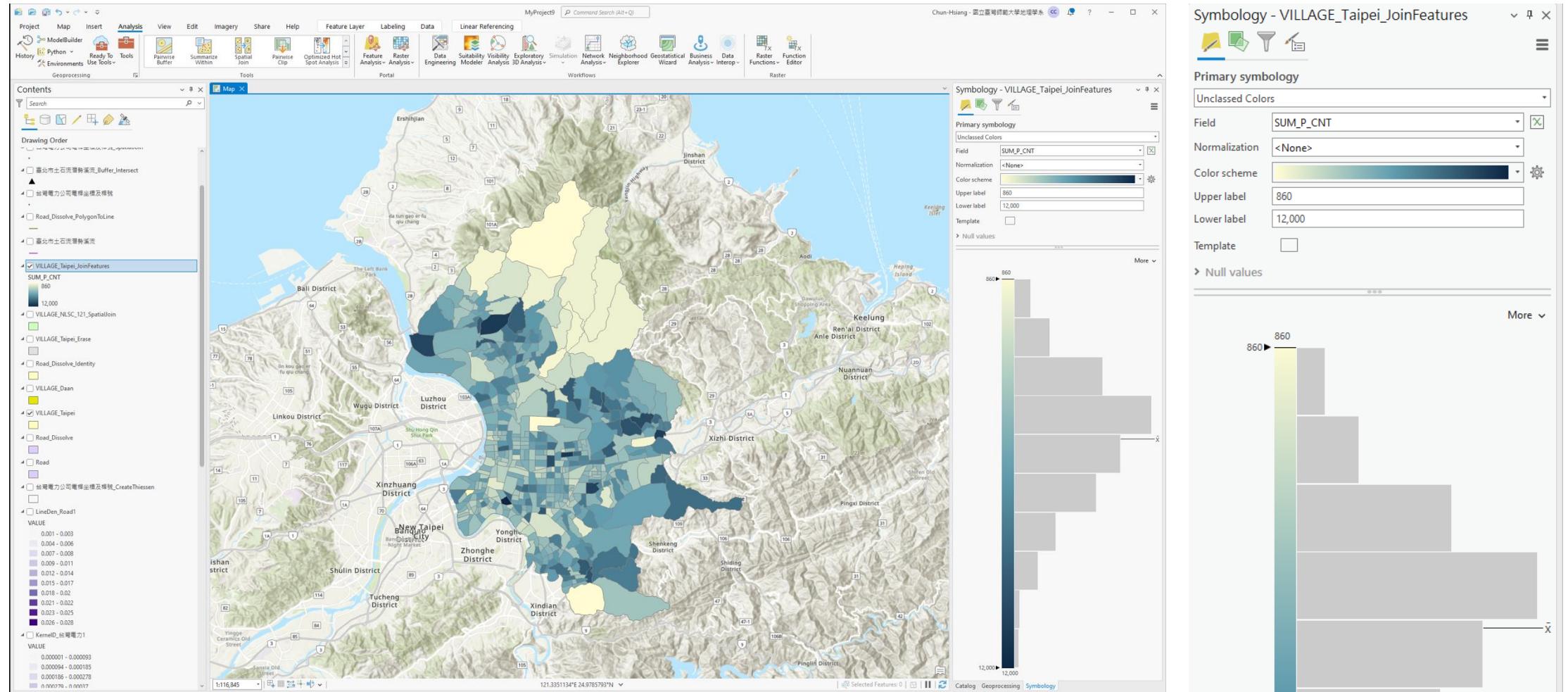
Symbology :: Graduated Colors with P_CNT



Symbology :: Bivariate Colors with P_CNT



Symbology :: Unclassed Colors with P_CNT



Symbology :: Graduated Symbols for Polygon with P_CNT

The screenshot illustrates the use of graduated symbols in ArcGIS Pro to represent population data (P_CNT) across different geographic areas. The map shows New Taipei City with various districts labeled, including Xinzhuang, Zhonghe, Shilin, Tucheng, Shimen, Xindian, Pingtung, Shuanghe, Xizhi, Renai, Nuannuan, Anle, and Keelung. The population density is visualized using circles of varying sizes and colors, where larger circles indicate higher population counts.

Symbology - VILLAGE_Taipei_JoinFeatures

Primary symbology

Graduated Symbols

Field: SUM_P_CNT

Normalization: <None>

Method: Equal Interval (highlighted)

Classes: 10

Minimum size: 4 pt | **Maximum size:** 18 pt

Template: Background

Draw graduated symbols above all layers

Symbol	Upper value	Label
●	≤ 1987.2	861.000000 - 1987.200000
○	≤ 3113.4	1987.200001 - 3113.400000
○	≤ 4239.6	3113.400001 - 4239.600000
○	≤ 5365.8	4239.600001 - 5365.800000
○	≤ 6492	5365.800001 - 6492.000000
○	≤ 7618.2	6492.000001 - 7618.200000
○	≤ 8744.4	7618.200001 - 8744.400000
○	≤ 9870.6	8744.400001 - 9870.600000
○	≤ 10996.8	9870.600001 - 10996.800000
○	≤ 12123	10996.800001 - 12123.000000

Symbology - VILLAGE_Taipei_JoinFeatures

Primary symbology

Graduated Symbols

Field: SUM_P_CNT

Normalization: <None>

Method: Equal Interval (highlighted)

Classes: 10

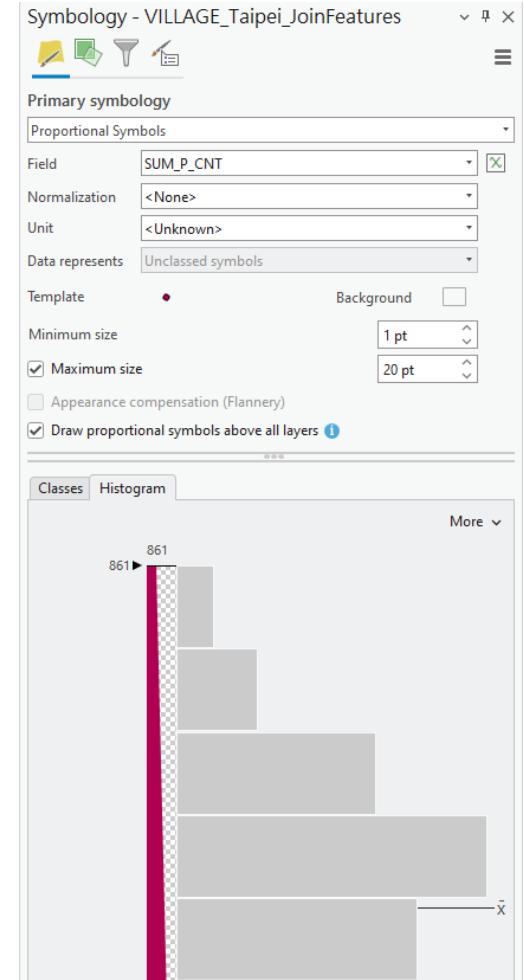
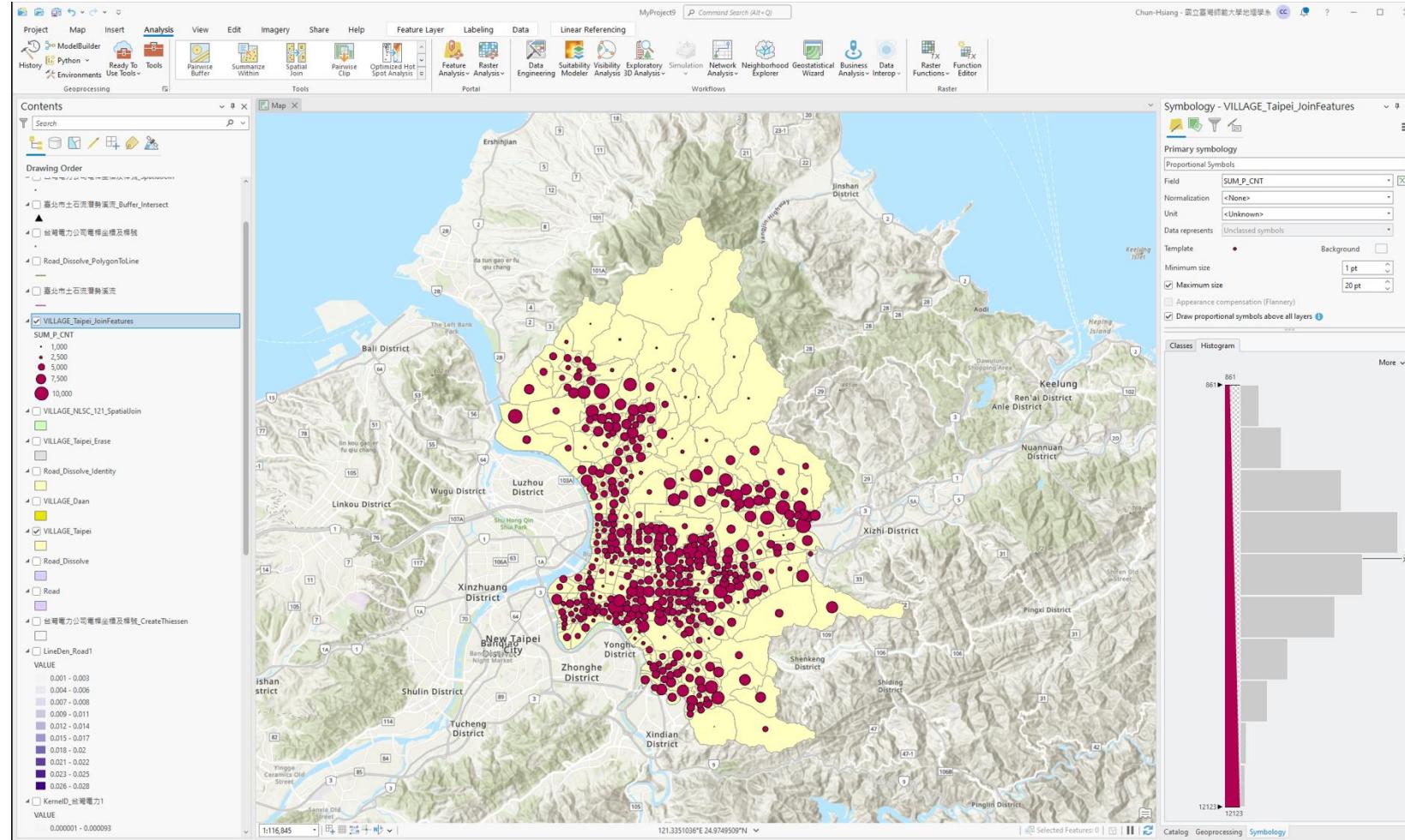
Minimum size: 4 pt | **Maximum size:** 18 pt

Template: Background

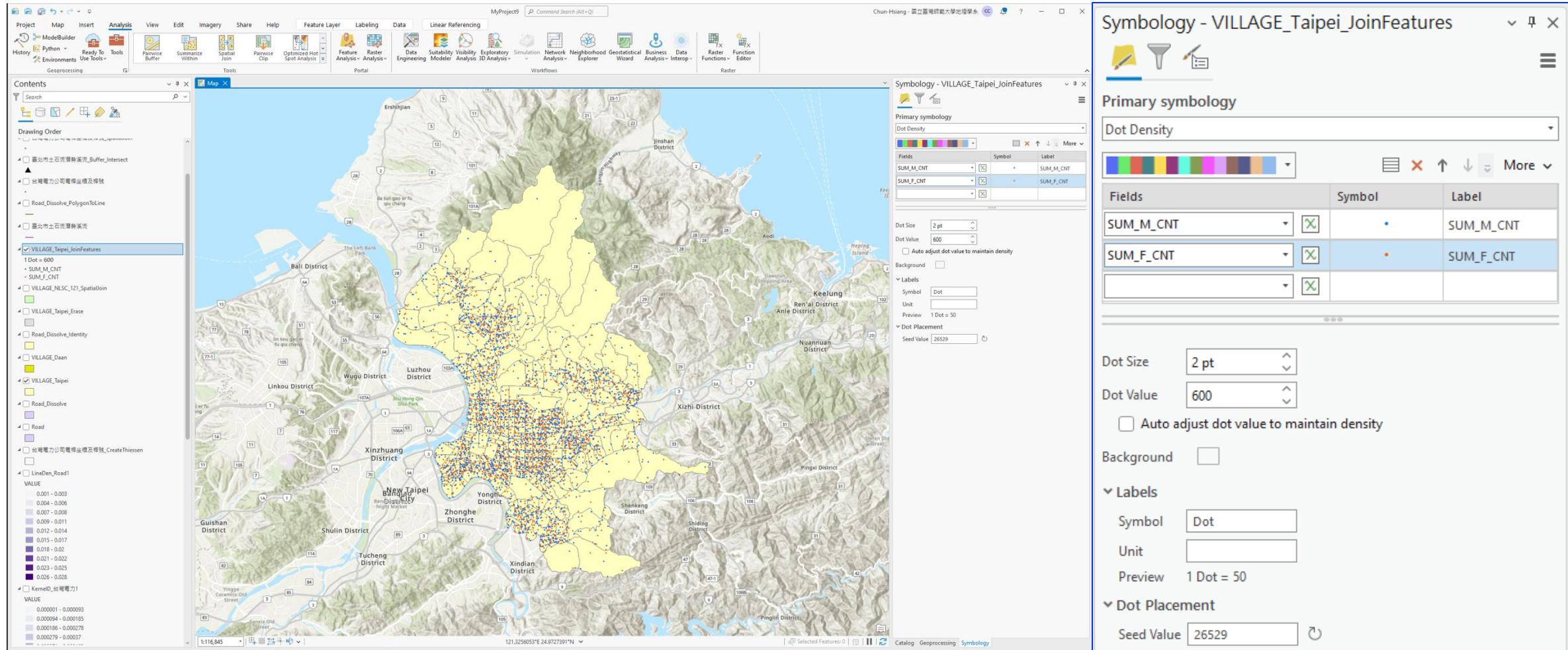
Draw graduated symbols above all layers

Symbol	Upper value	Label
●	≤ 1987.2	861.000000 - 1987.200000
○	≤ 3113.4	1987.200001 - 3113.400000
○	≤ 4239.6	3113.400001 - 4239.600000
○	≤ 5365.8	4239.600001 - 5365.800000
○	≤ 6492	5365.800001 - 6492.000000
○	≤ 7618.2	6492.000001 - 7618.200000
○	≤ 8744.4	7618.200001 - 8744.400000
○	≤ 9870.6	8744.400001 - 9870.600000
○	≤ 10996.8	9870.600001 - 10996.800000
○	≤ 12123	10996.800001 - 12123.000000

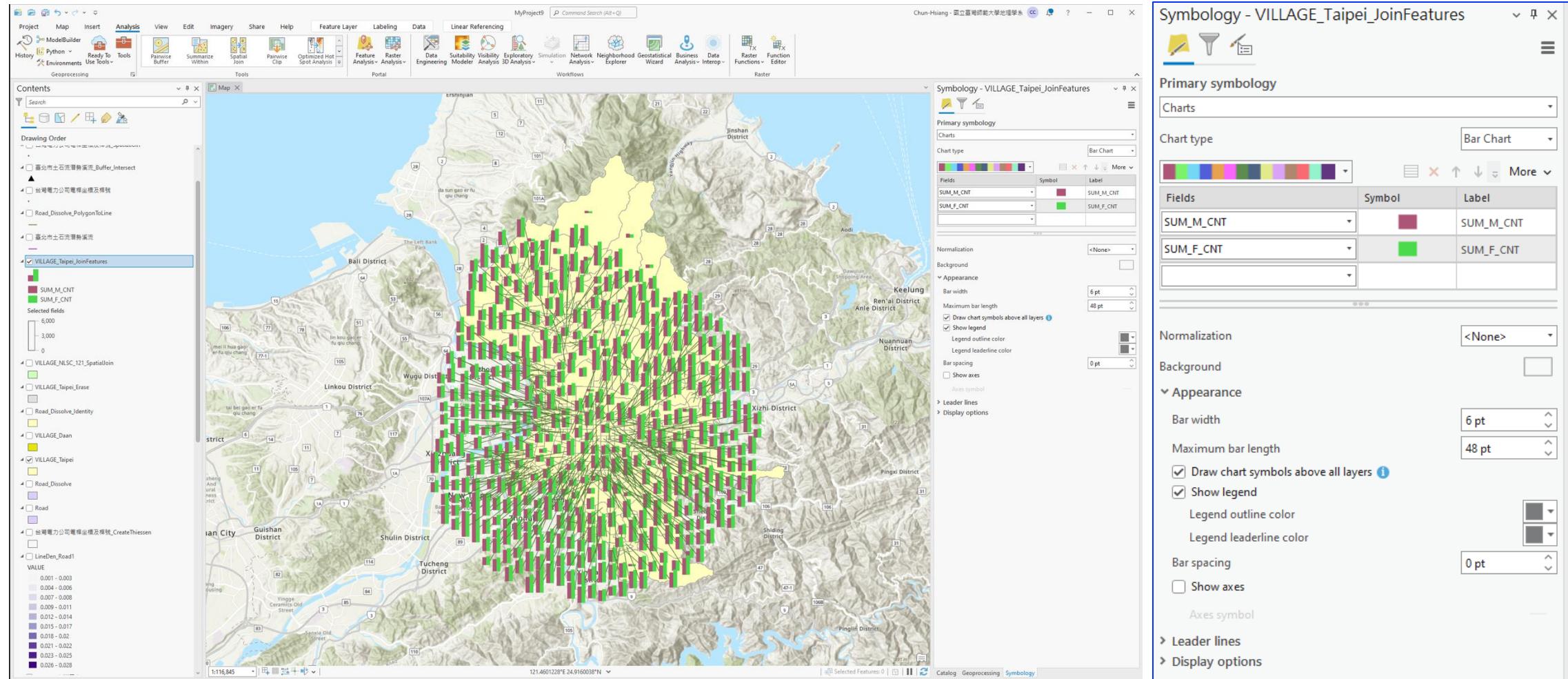
Symbology :: Proportional Symbols for Polygon with P_CNT



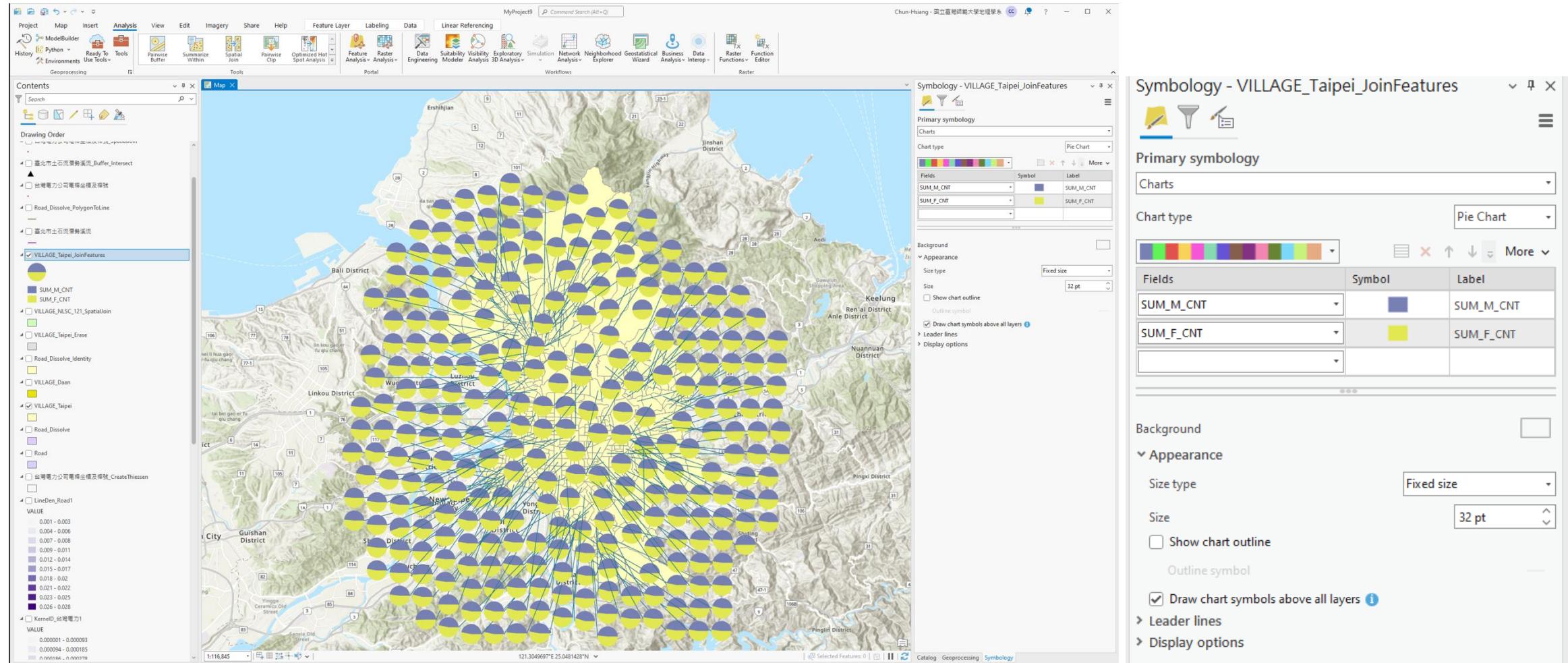
Symbology :: Dot Density for Polygon (M/F)



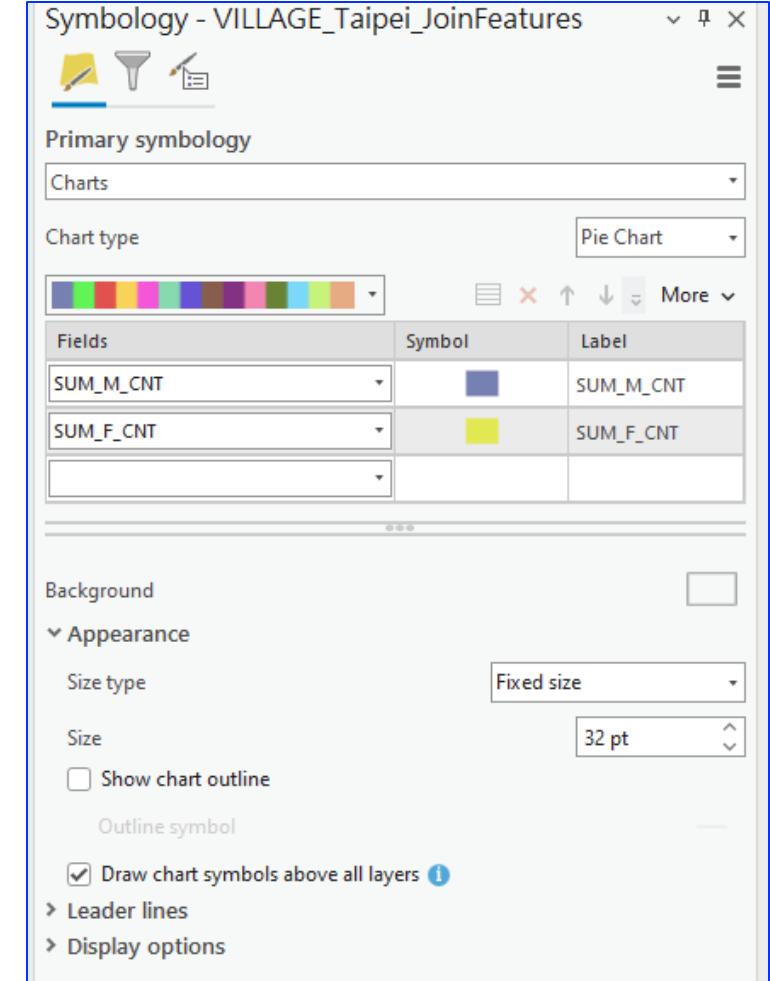
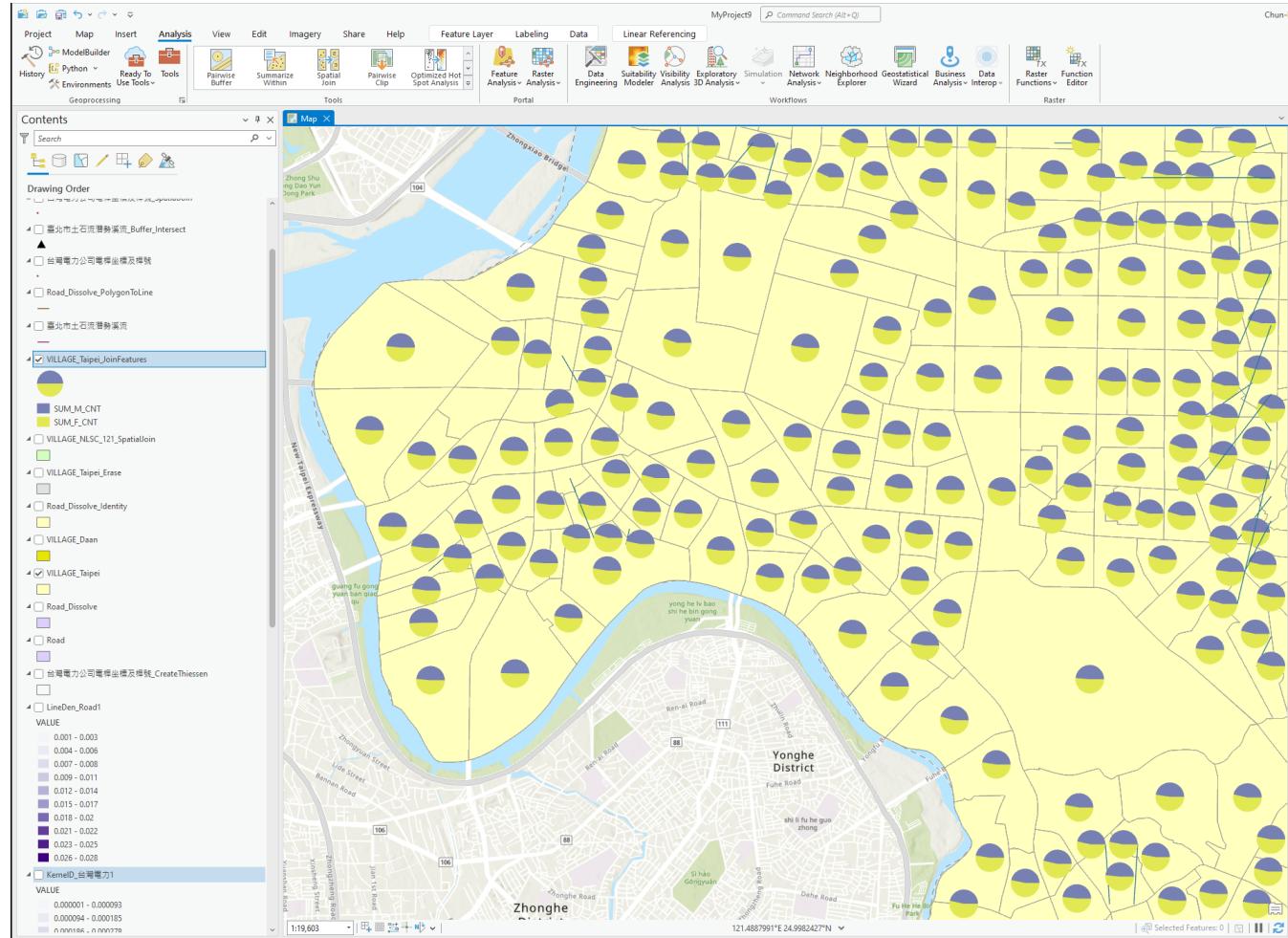
Symbology :: Bar Chart for Polygon (M/F)



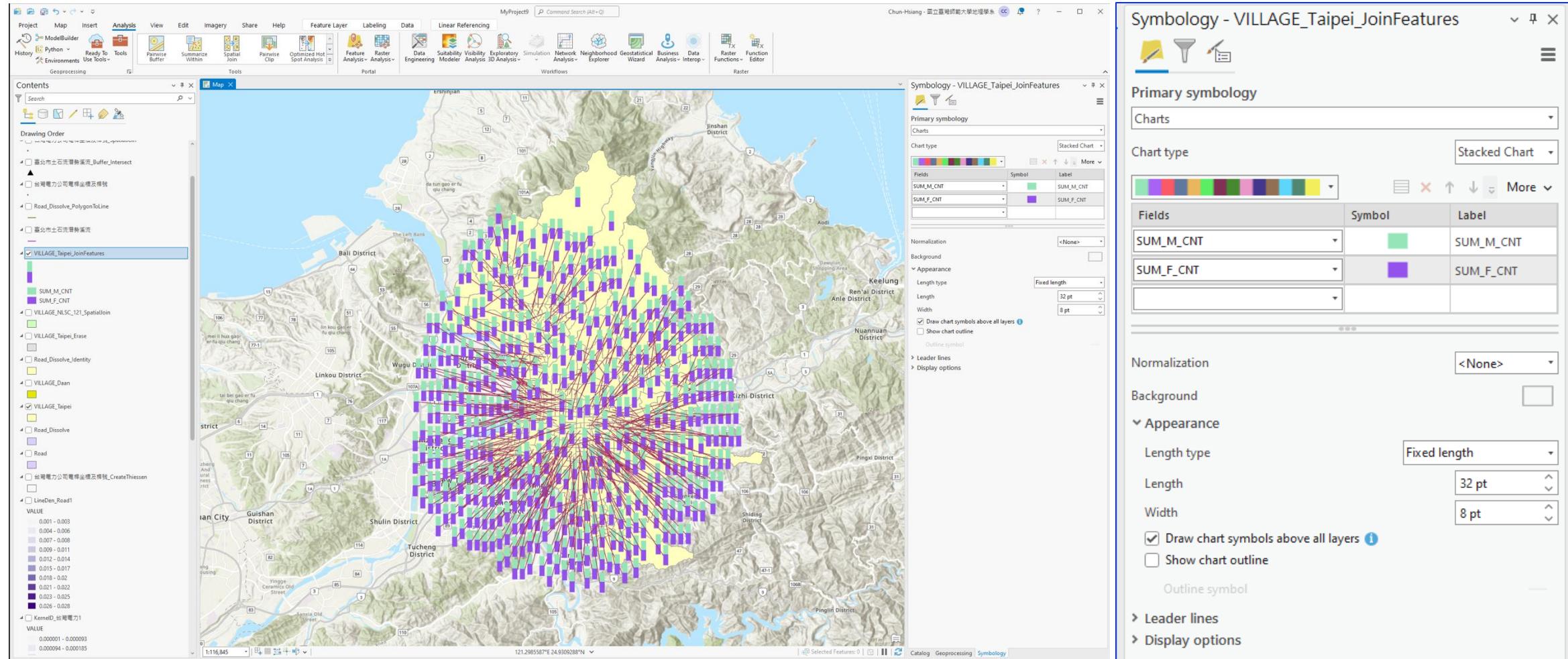
Symbology :: Pie Chart for Polygon (M/F)



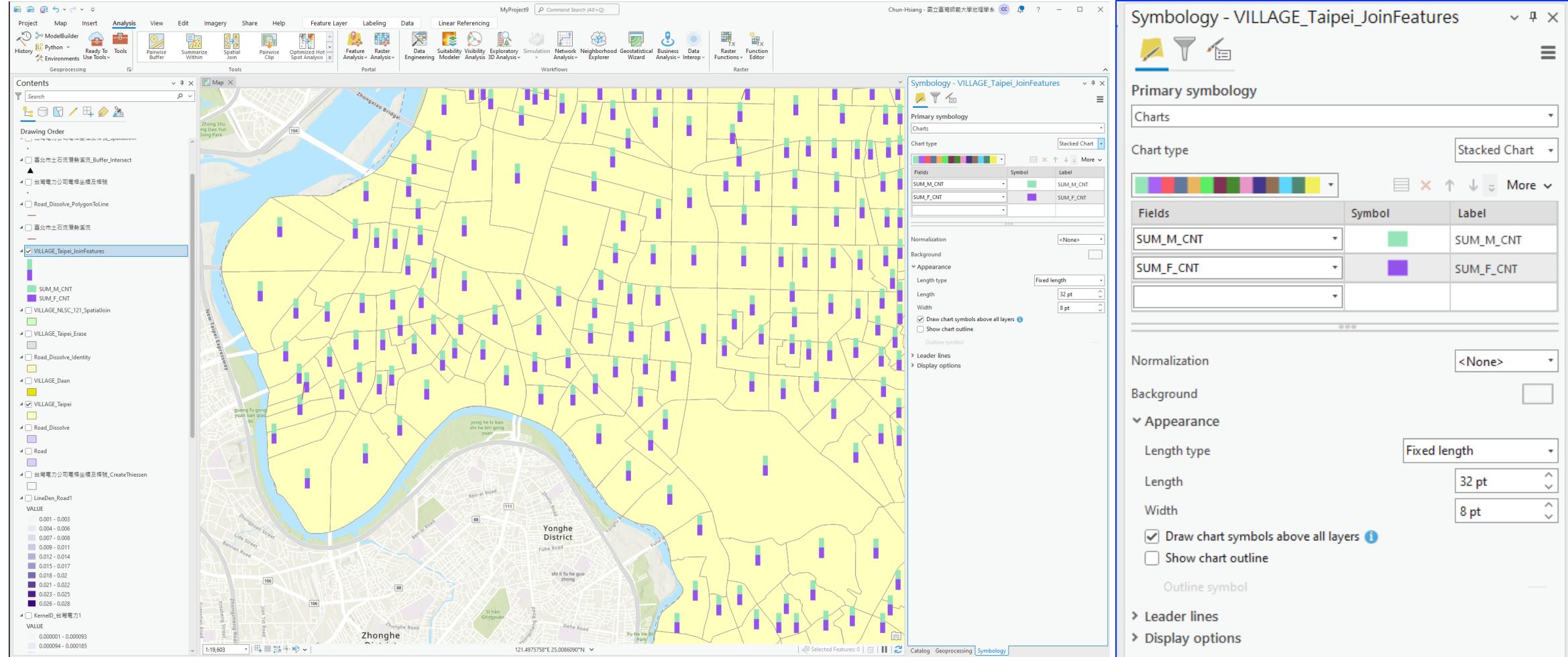
Symbology :: Pie Chart for Polygon (M/F)



Symbology :: Stacked Chart for Polygon (M/F)



Symbology :: Stacked Chart for Polygon (M/F)



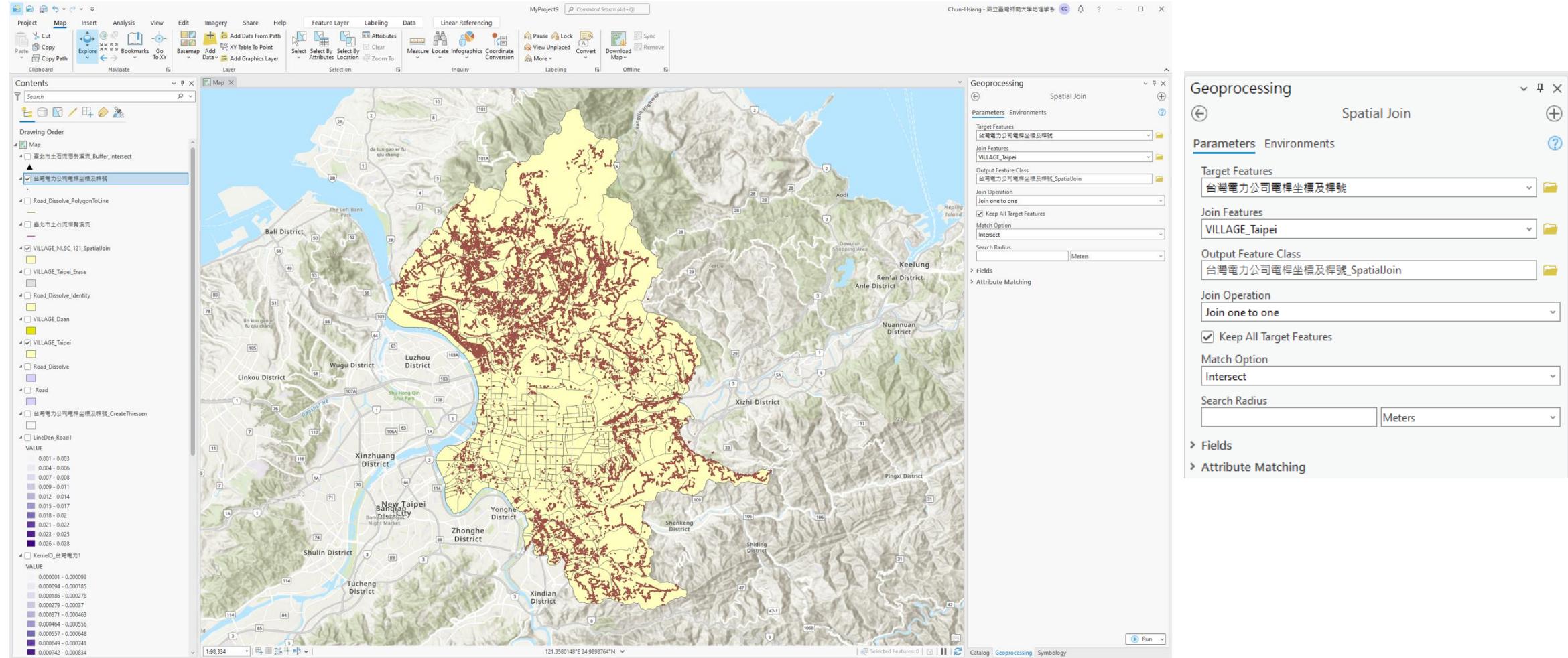
Symbology :: Point

Feature to Point/ Single Symbol/ Unique Values/ Graduated Colors/ Bivariate Colors/ Unclassed Colors/ Proportional Symbols/ Graduated Symbols/ Dot Density

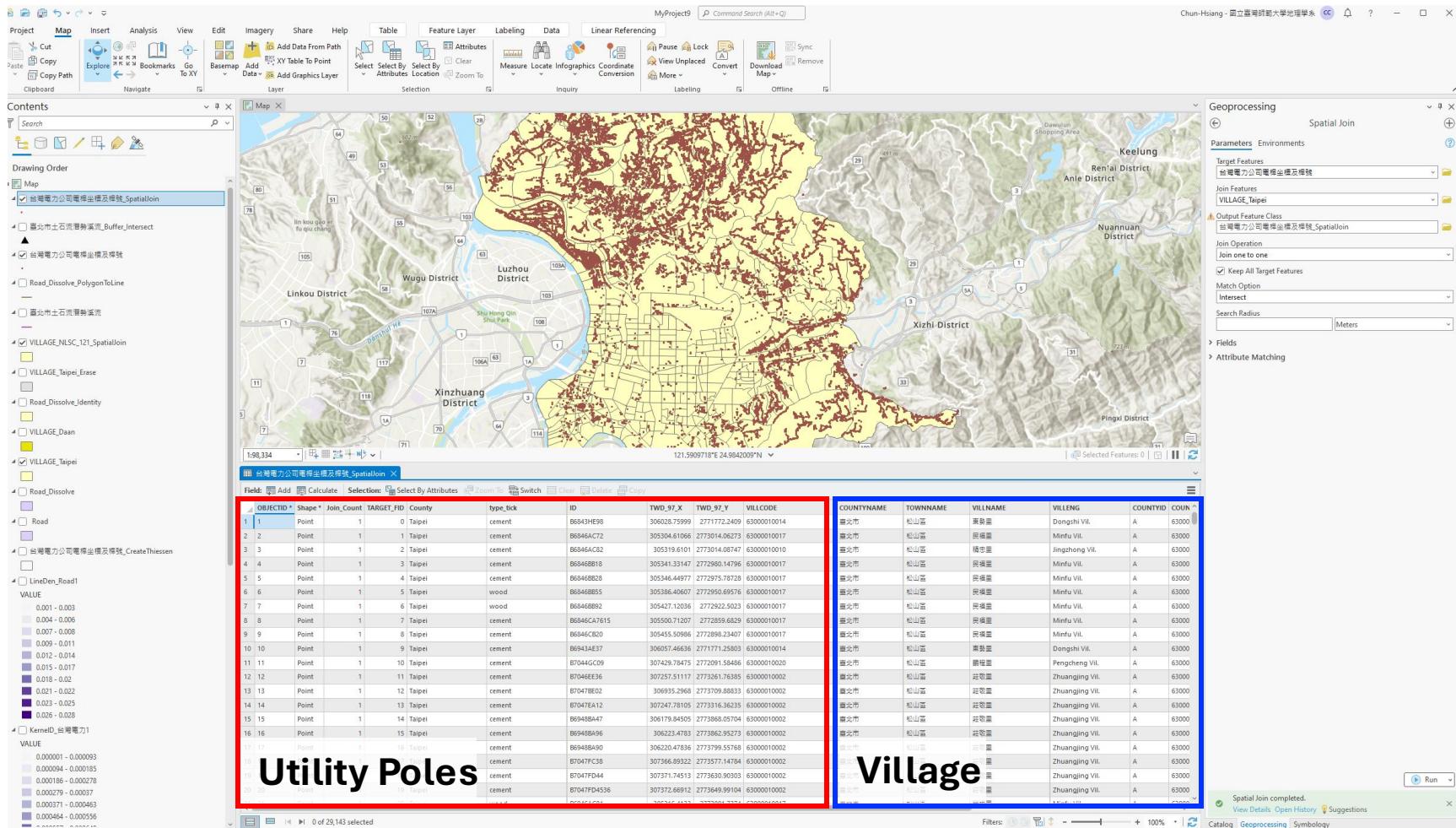
Procedure for Aggregated Features

- 1) **Spatial Join** for Adding Village into Each Ups
- 2) **Spatial Join** for Counting UPs of Each Village
- 3) **Dissolve** the Spatial Joined UP Layer into Village Resolution
- 4) **Feature To Point** for Converting Dissolved and Spatial Joined UP Layer to Single Point
- 5) **Symbolology :: Single Symbols** :: Types of Symbols
- 6) **Symbolology :: Single Symbols** :: Symbols and Properties
- 7) **Symbolology :: Single Symbol**
- 8) **Symbolology :: Unique Values** by District
- 9) **Symbolology :: Graduated Colors** by UP_CNT
- 10) **Symbolology :: Unclassed Colors** with UP_CNT
- 11) **Symbolology :: Proportional Symbols** with UP_CNT
- 12) **Symbolology :: Dot Density** with UP_CNT

Spatial Join for Adding Village into Each Ups



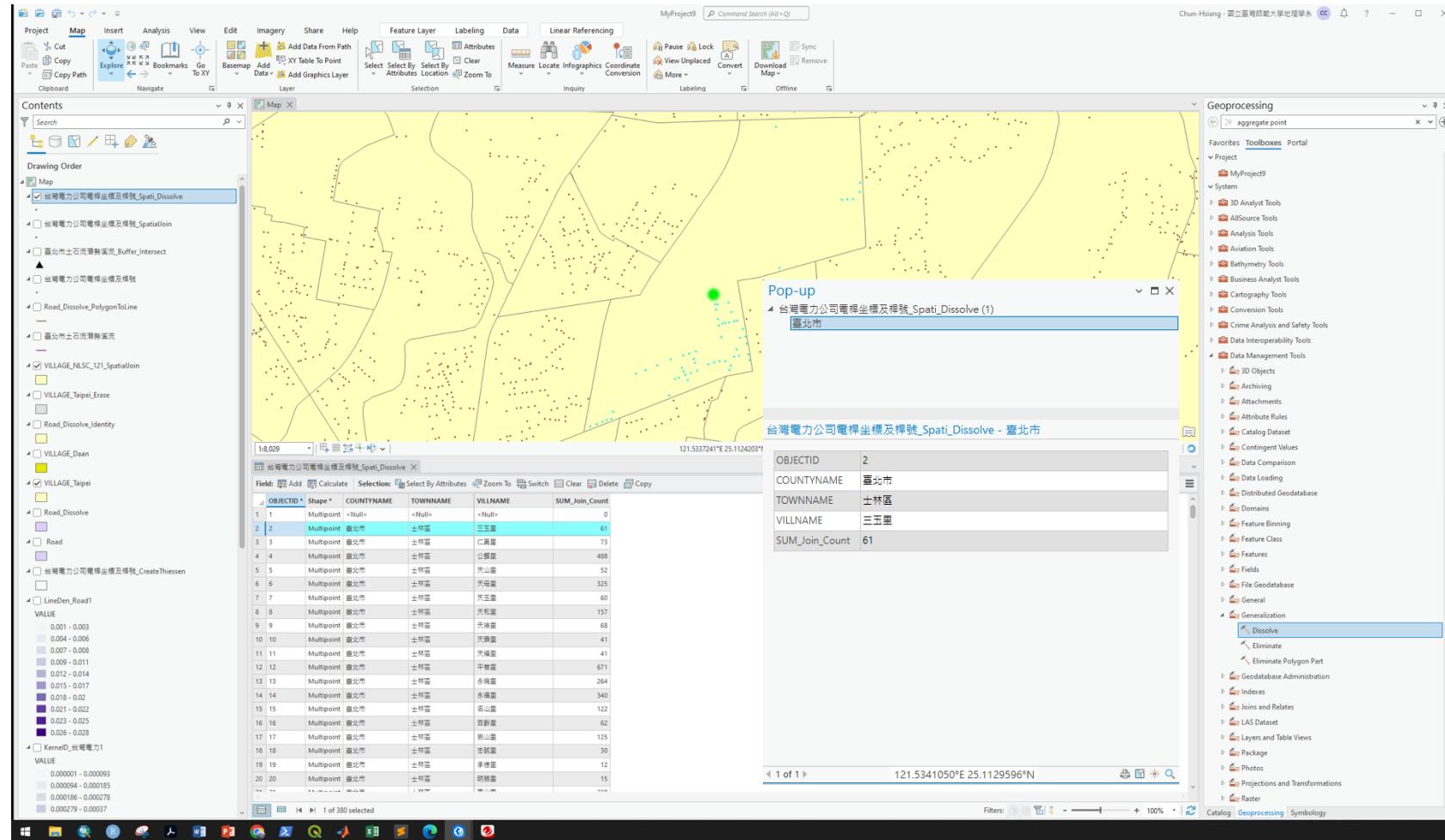
Spatial Join for Counting UPs of Each Village



Dissolve the Spatial Joined UP Layer into Village Resolution

The screenshot displays a geographic information system (GIS) interface in ArcGIS Pro. The main window shows a map of the Taipei metropolitan area, including districts like Wugu, Luxhou, Xinzhuang, and Keelung. A specific layer, '台灣電力公司電桿坐標及桿號_SpatialJoin', is highlighted in the contents pane. This layer contains numerous red points representing utility poles, overlaid on a road network and other geographical features. Below the map is a table with 20 rows of data, showing attributes such as OBJECTID, Shape, Join_Count, TARGET_FID, County, type_tick, ID, TWD_97_X, TWD_97_Y, VILLCODE, COUNTYNAME, TOWNNAME, VILLNAME, VILLENG, COUNTYID, and COUN. The Geoprocessing pane on the right shows the 'Dissolve' tool being used to process this data. The 'Input Features' field is set to '台灣電力公司電桿坐標及桿號_SpatialJoin'. The 'Output Feature Class' field is set to '台灣電力公司電桿坐標及桿號_Spati_Dissolve'. Under 'Dissolve Fields', 'VILLNAME' is selected. Under 'Statistics Fields', 'Join_Count' is selected with a 'Sum' statistic type. A checked checkbox indicates 'Create multipart features'.

Dissolve the Spatial Joined UP Layer into Village Resolution



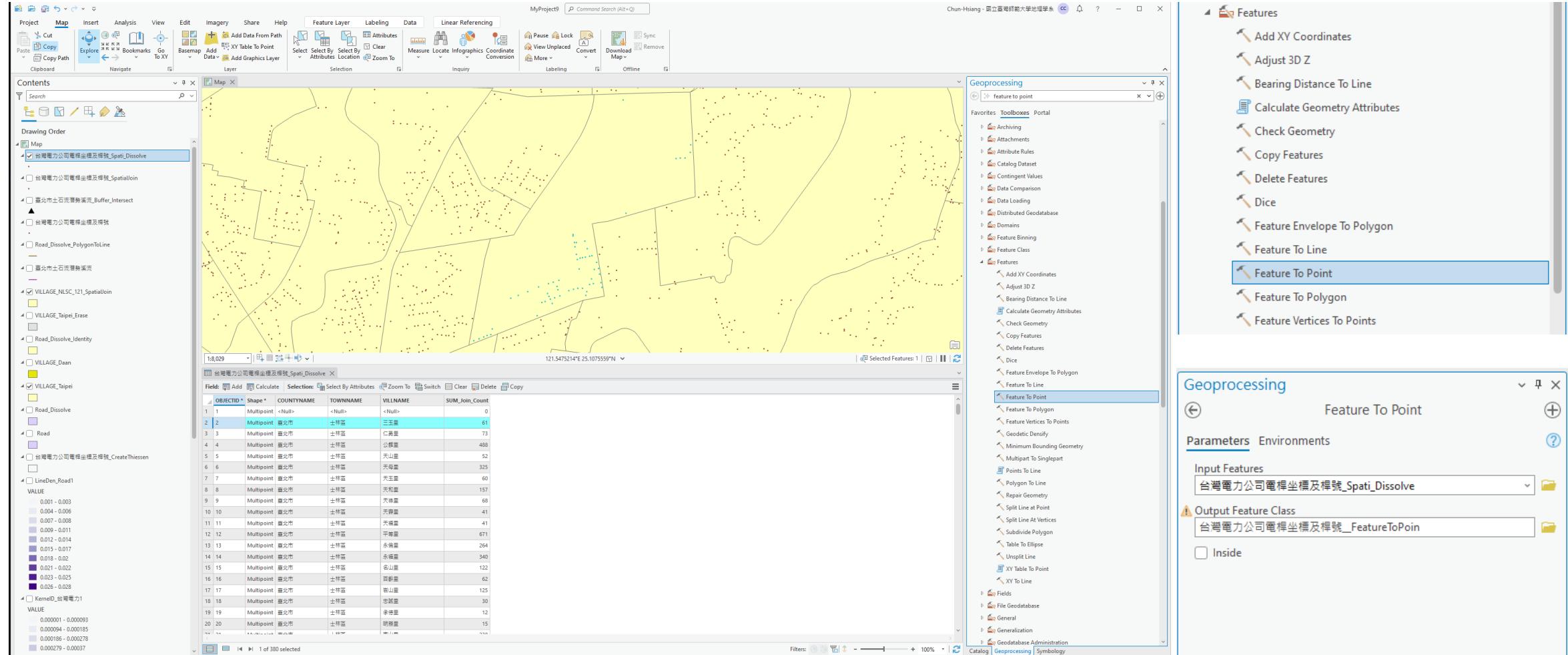
Every row is Multipoint!!!

So, our target is to merge all points within the same village into a single point.

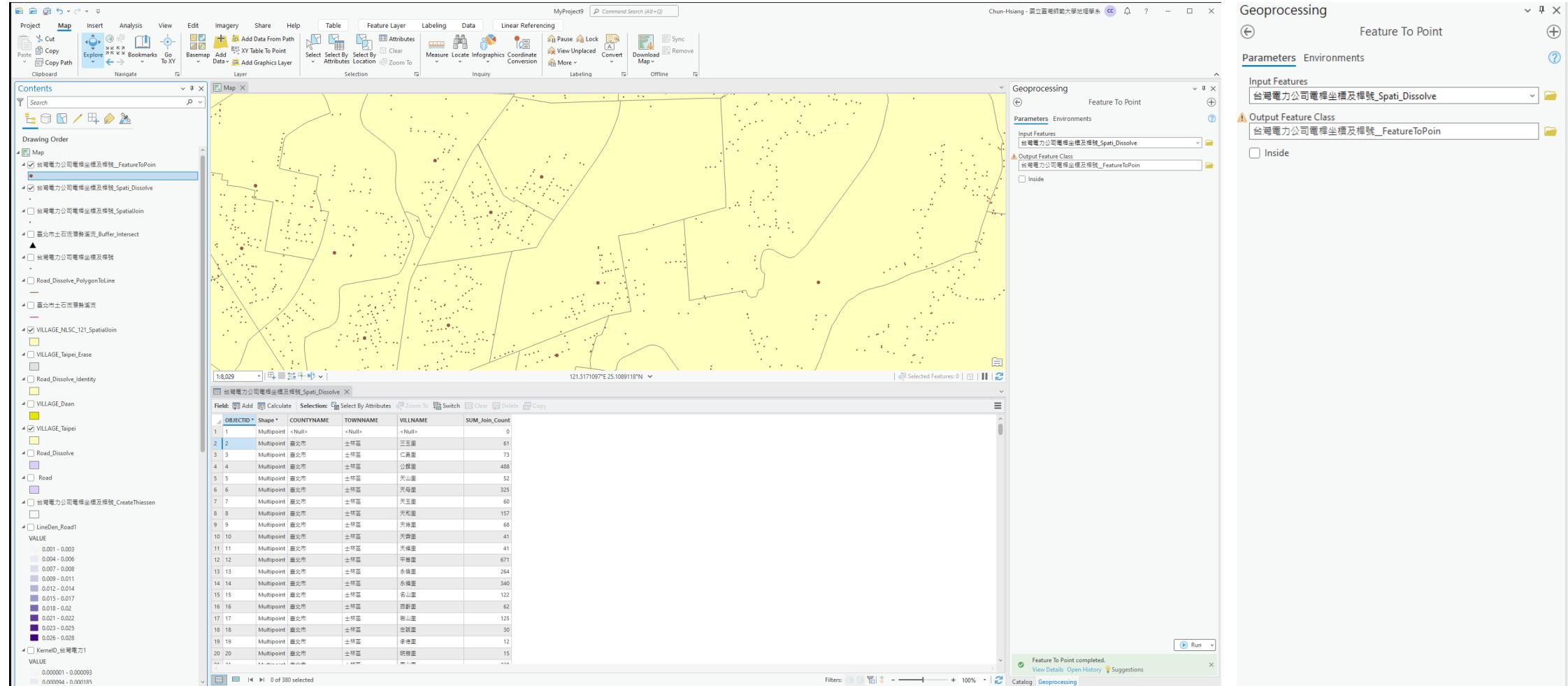
The screenshot shows the Geoprocessing pane with the "Dissolve" tool selected under the "General" category. To the right, a table titled "台灣電力公司電桿坐標及桿號_Spati_Dissolve" displays the dissolved data. The table has the following columns: OBJECTID, Shape *, COUNTYNAME, TOWNNAME, VILLNAME, and SUM_Join_Count. The data shows that all 380 rows have been dissolved into 20 unique village clusters, each represented by a single point.

OBJECTID	Shape *	COUNTYNAME	TOWNNAME	VILLNAME	SUM_Join_Count
1	Multipoint	<Null>	<Null>	<Null>	0
2	Multipoint	臺北市	士林區	三玉里	61
3	Multipoint	臺北市	士林區	仁美里	73
4	Multipoint	臺北市	士林區	公館里	488
5	Multipoint	臺北市	士林區	天山里	52
6	Multipoint	臺北市	士林區	天玉里	325
7	Multipoint	臺北市	士林區	天玉里	60
8	Multipoint	臺北市	士林區	天和里	157
9	Multipoint	臺北市	士林區	天福里	68
10	Multipoint	臺北市	士林區	天福里	41
11	Multipoint	臺北市	士林區	天福里	41
12	Multipoint	臺北市	士林區	平埔里	671
13	Multipoint	臺北市	士林區	永倫里	264
14	Multipoint	臺北市	士林區	永福里	340
15	Multipoint	臺北市	士林區	名山里	122
16	Multipoint	臺北市	士林區	百齡里	62
17	Multipoint	臺北市	士林區	岩山里	125
18	Multipoint	臺北市	士林區	忠誠里	30
19	Multipoint	臺北市	士林區	承德里	12
20	Multipoint	臺北市	士林區	明勝里	15

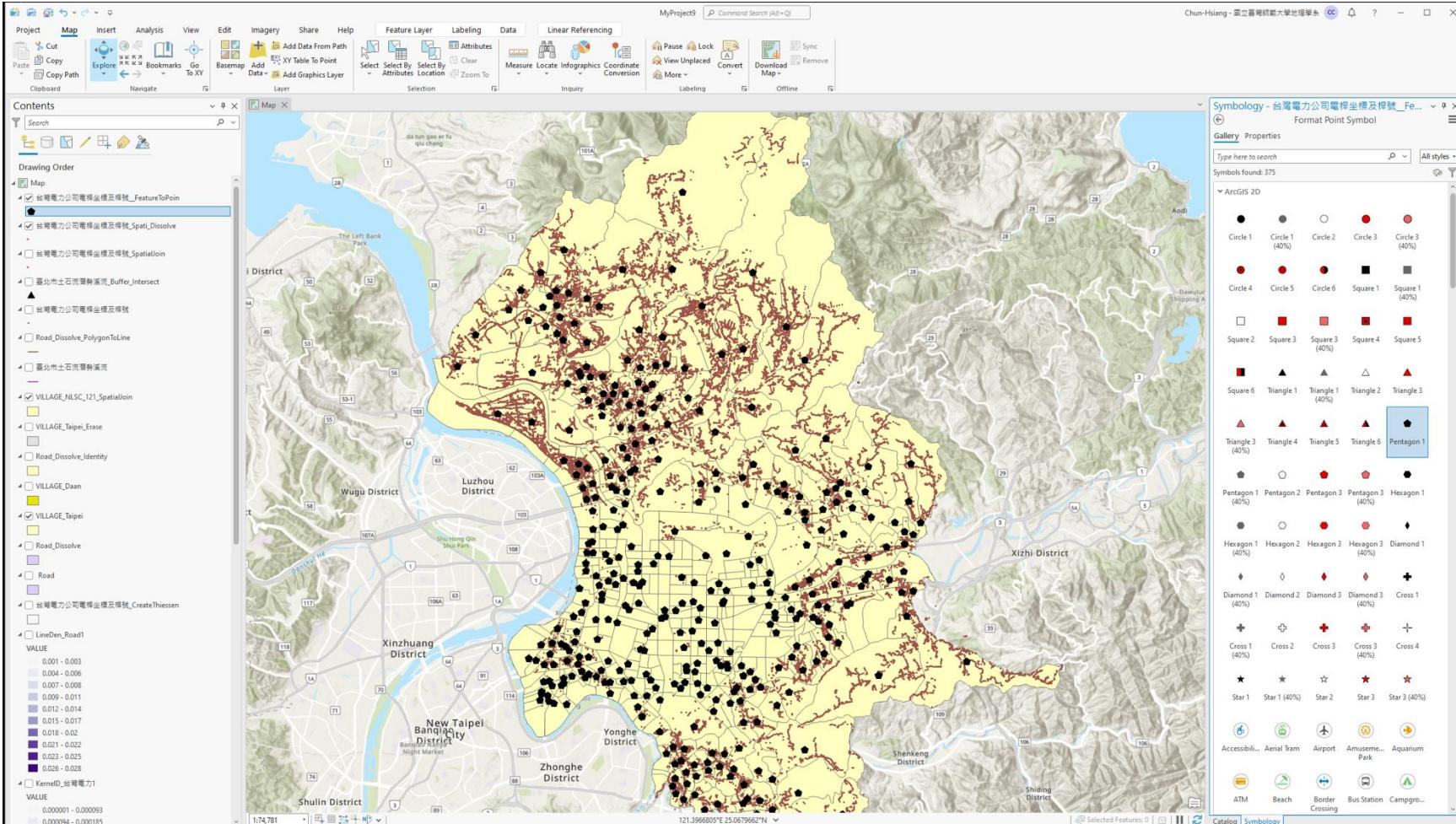
Feature To Point for Converting Dissolved and Spatial Joined UP Layer to Single Point



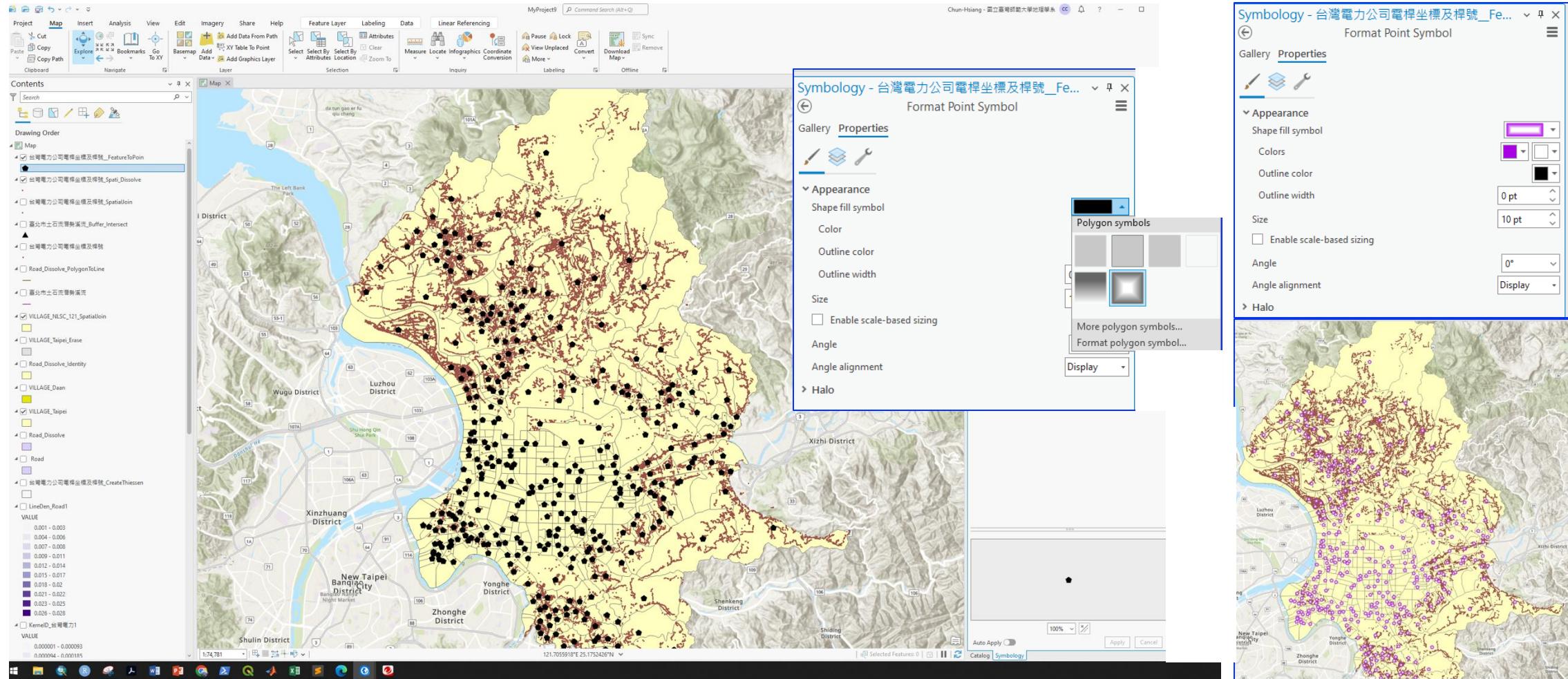
Feature To Point for Converting Dissolved and Spatial Joined UP Layer to Single Point



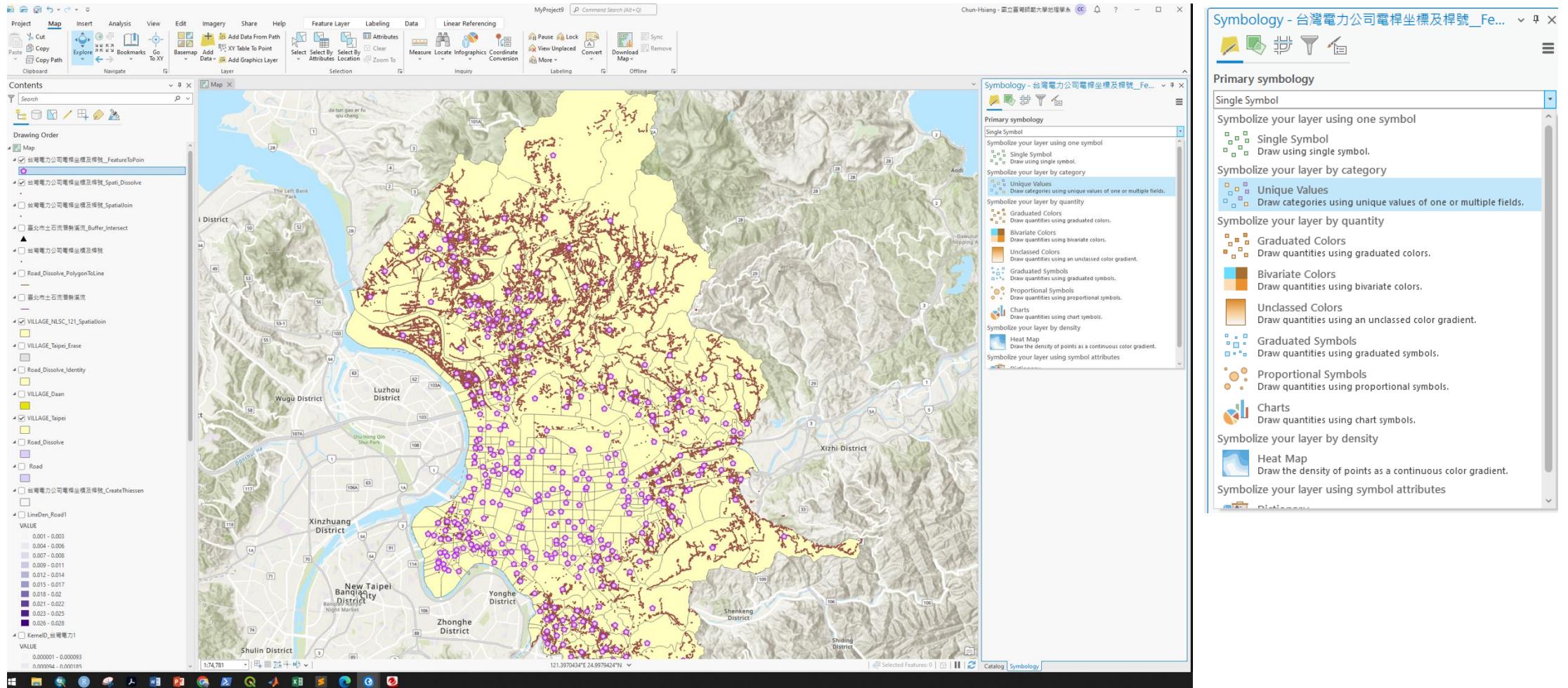
Symbology :: Single Symbols :: Types of Symbols



Symbology :: Single Symbols :: Symbols and Properties



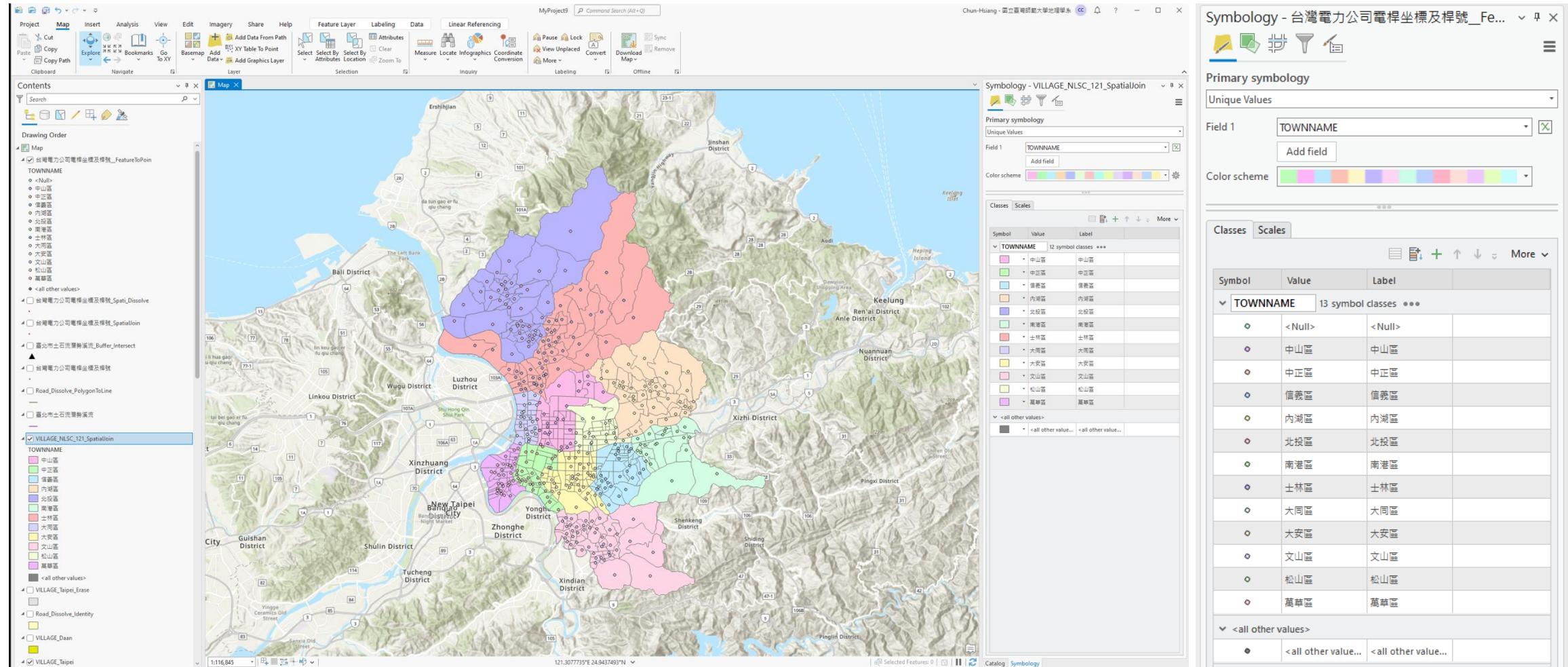
Symbology :: Single Symbol



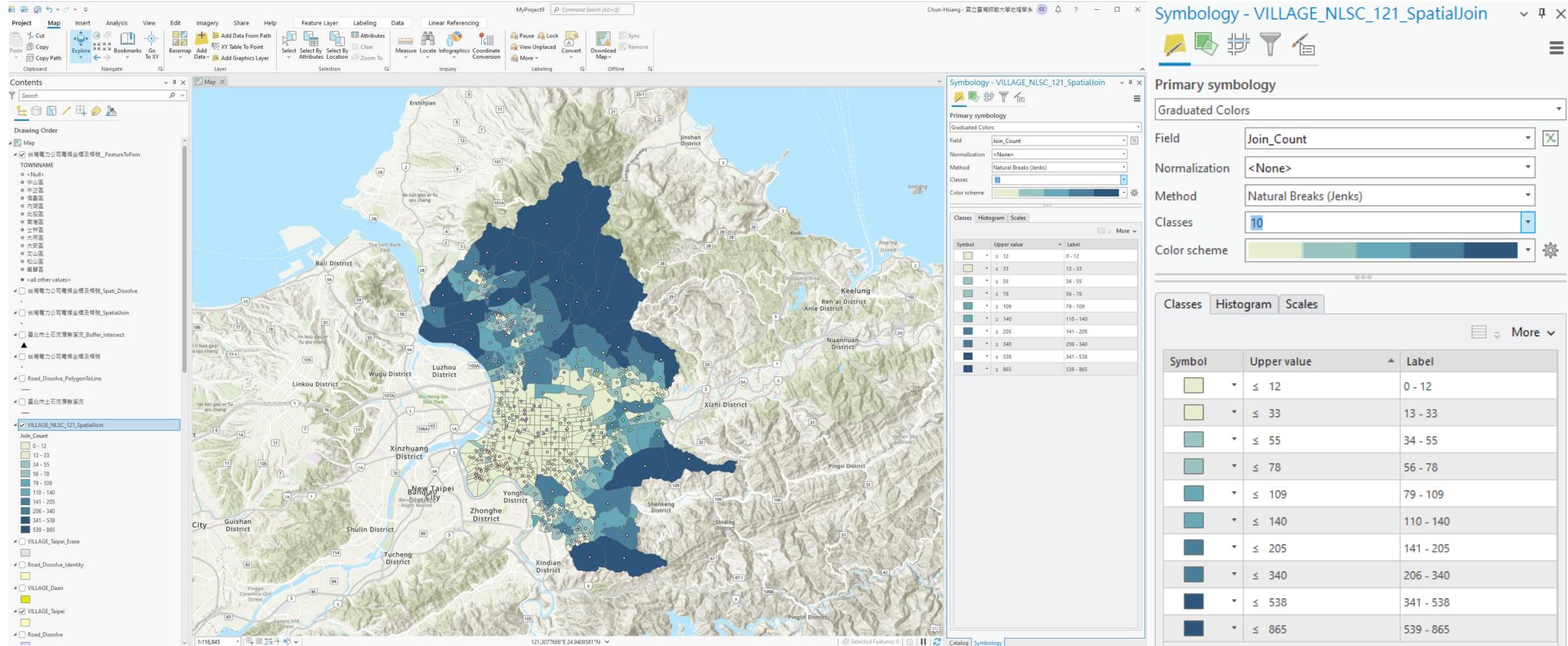
Symbology :: Single Symbol by District

The screenshot shows the ArcGIS Pro interface with a map of Taipei, Taiwan, displayed in the center. The map features various districts outlined in green, representing a single symbol for each district. The districts labeled include Jinshan District, Keelung, Renai District, Anle District, Nuannuan District, Xizhi District, Pingxi District, Shilong District, Shengkeng District, Zhonghe District, Xindian District, Tucheng District, Shulin District, and New Taipei City. A legend on the right side of the map provides a key for these green symbols. To the left of the map is the 'Contents' pane, which lists numerous layers and features used in the project, such as 'VILLAGE_Taipei_JoinFeatures', 'VILLAGE_NLSC_121_SpatialJoin', 'VILLAGE_Taipei_Erase', 'Road_Dissolve_Identity', 'VILLAGE_Dean', 'VILLAGE_Taipei', 'Road Dissolve', 'Road', 'VILLAGE_Taipei_CreateThiessen', and 'LineDen_Road1'. Below the map is a detailed legend titled 'Symbology - VILLAGE_Taipei_JoinFeatures' and 'Format Polygon Symbol', which includes categories like Building Footprint, Government, Park, Recreation, Water (area), Airport, and Landmark/POI, each with multiple color options. Another identical legend is shown below it.

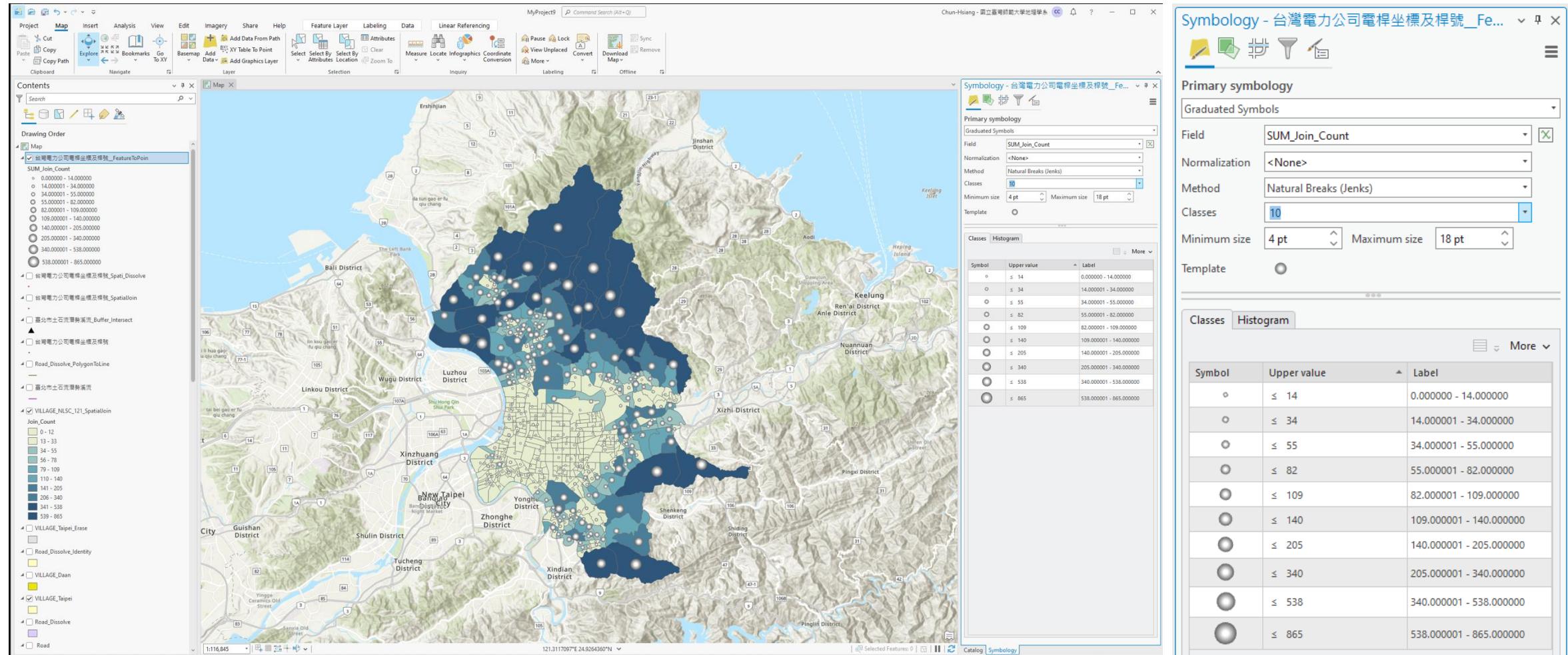
Symbology :: Unique Values by District



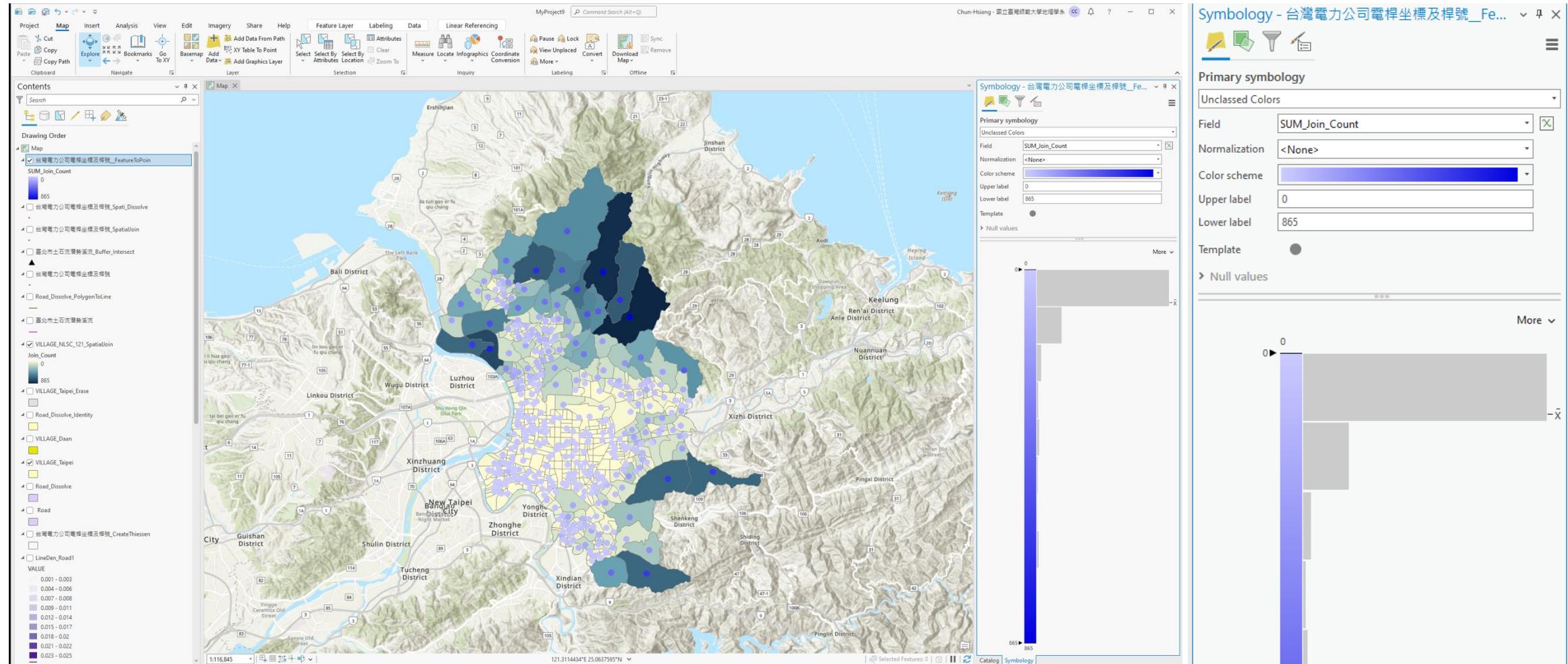
Symbology :: Graduated Colors by UP_CNT



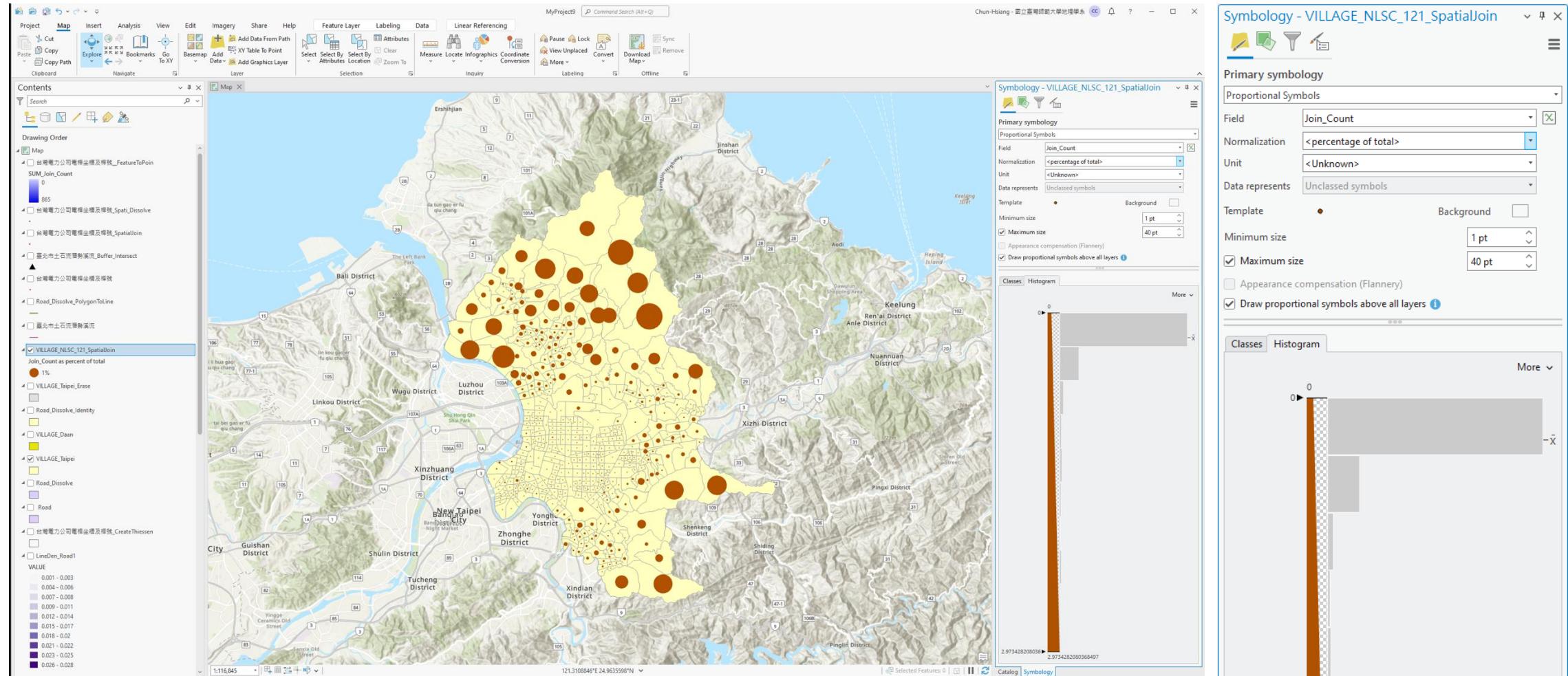
Symbology :: Graduated Symbols by UP_CNT



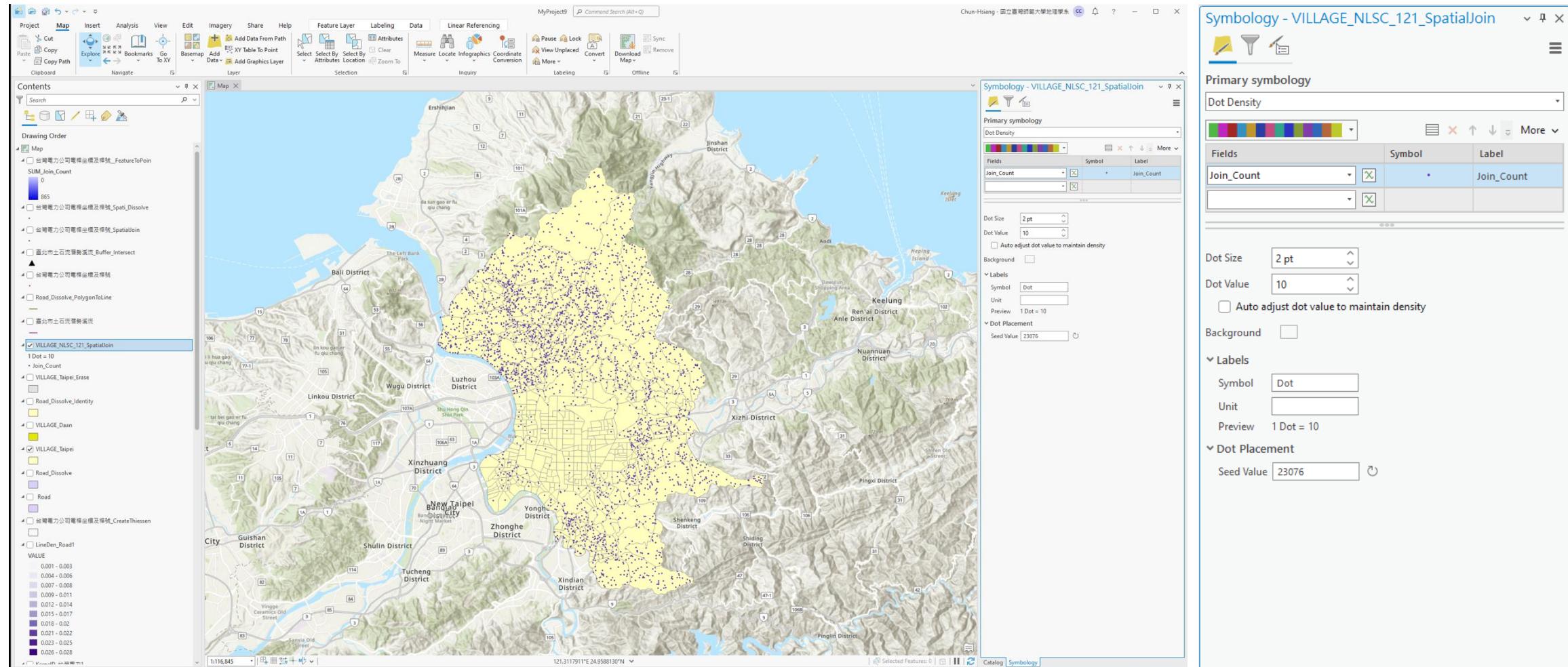
Symbology :: Unclassed Colors with UP_CNT



Symbology :: Proportional Symbols with UP_CNT



Symbology :: Dot Density with UP_CNT



The End

Thank you for your attention!

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